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# The Effect of Play Therapy on Adaptability Level of Mentally retarded Female and Male Children at Esfarayen

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#### **ABSTRACT**

Mental retardation (MR) governs general intellectual performance, which is meaningfully lower that average and comes simultaneously with dysfunctions in adaptive behavior that is observed at the age of development. This study is intending to investigate the impact of play therapy on adaptability level of mentally disables children. In the framework of experimental design, 20 first-year elementary school and preschool mentally retarded students from Esfarayen town participated in two experimental and control groups (ten male and ten female students). Statistical population of this research includes 36 persons. Research design is pretest-posttest with control group. To measure adaptability levels, Adaptability Questionnaire for Children was used. Control groups were subject to play therapy for 18 sessions each lasting 15 to 30 minutes for 6 weeks. Covariance analysis method was employed to analyze data. Findings showed that play therapy results in improvement of adaptability levels in mentally disables children. Therefore, play therapy can be used as an effective technique for treatments of mentally retarded children's incompatibilities.

KEY WORDS: Play therapy; social adaptability; mentally retarded children

#### **INTRODUCTION**

Drastic changes in mental retardation (MR) definitions have occurred since the mentally retarded were taken into attentive consideration. Mental retardation is an essential constraint in one's performance whose intellectual functions are significantly lower that average. This is observed simultaneously in at least two adaptive skills: communications, self-cares, leading a life, social skills, using communal resources, self-management, health and safety, academic performance, working, and leisure. MR is revealed before the age of eighteen. The approach taken by the American Association on Mental Retardation is a multifaceted one into the issue ofmental retardation. This approach has led to broader MR conceptualization, multilateral investigation of behaviors, and emphasis on one's demands for being supported. One of the dimensions of this approach is related to adaptive behaviors. The concept of adaptive behavior, as delineated in conceptual, social, and practical adaptive skills and elaborated in the 2002 guideline, is a historical continuation of adaptive behavior in identification of retardation diagnosis (McGrew, Bruninks, and Johnson, 1996; Thompson et al. And Widaman and McGrew, 1996). Adaptive skills of the mentally retarded are not usually comparable to their normal counterparts, since a mentally retarded child may confront problems in acquiring and utilizing masteries because of some reasons, including distraction, inattention, inability to recognize social cues and clues, and impulsive behaviors (Agran and Hemaver, 1999; Bendaviz and Matson, 1993; Bergen and Mosley, 1994; Mc Alpine, Kendali, and Singn, 1991; Merrill and Peacock, 1994). In their studies on 764 children attending regular training courses, Pirastin and Lifert (1997) characterized 20 mentally retarded students who were socially rejected. As one of their prominent features, those who were socially accepted possessed high levels of social skills. Such children were not supposed by their normal peers as having hostile behaviors. Experts believe that reorganization and training skills which distinguish rejected children from accepted ones are invaluable. Play therapy has been found to be one of the methods for realization of this issue. It is an approach rounded upon treatment theory that established children's leaning processes and natural, normalized relationships (Carmichael, 2006; Landert, 2002; O'Cannor and Schaefer, 1983). Therapeutic power which is latent in play therapy is employed in different manners. Therapists instruct more adaptive behaviors to children with impotent social or mental skills (Pedro, Caroll, and Reddy, 2005). Games provide several benefits and values for children: they understand phenomena through their games, comprehend relationships, feel easiness, and use acceptance as an instrument to build interactive rapports, to test, and to overcome external realities (Hatton). One of the applications of games in children growth and development is their therapeutic role. Referring to Thompson and Rudolf regarding

effects of play therapy on children, Shaffer believes that benefits of play therapy for children include breaking children's resistance, creating merit and ability, building creative thinking, refining, emotional discharge, role playing, fantasying, symbolic learning, creating and promoting attachment relationships, creating positive emotions, and overcoming the development-related fears.

By means of their therapeutic role, games provide an opportunity for children to discharge their concerns and dissatisfactions and express their emotions. Play therapy, in addition, is a mental refiner which reduces from intensity of failures and offers beneficial plans for solving problems upon gaming. Games are employed by play therapists as an instrument to assist children to encounter their basic behavioral problems. Play therapy and game-based interventions do not offer a new intellectual school (Deroz, 2006). Employment of play therapy techniques dates back to the 1930s by such experts as Hermione Hag Hellmuth, Anna Freud, and Melanie Klein. Since then, several healing procedures, which were specific originally to adults, have been adjusted for children, including child-centered play therapy designated by Virginia Axline (1974), sand play therapy developed from the theory of Song by Margaret Lowen Feld and Dora Kalff (1979), and Cognitive-Behavioral Play Therapy (CBPT) by Susan Nell (1993).

Effects by a disabled child on familial system have been accompanied by diversified economic, social, and mental reactions. Since families are considered a constellation or system of actions and reactions in psychological investigations, *family's emotional reactions* appear to be a general term. When a phenomenon such as mental disability gives rise to special emotions like parental feelings of guilt, this implicitly influences on reactions displayed by brothers, sisters, and even others. As a matter of fact, when a familial emotional system is addressed, psychological reactions and emotions expressed by all family members are meant.

An investigation of impacts of child disability on parents' psychological reactions was inaugurated in the 1960s, with inclusion of brothers' and sisters' reactions as from the 1970s. Since the 1980s onwards, especially in the recent years, researchers have managed to present new viewpoints on the manner families with disabled children internally interchange. Presence of a developmentally retarded child in a family creates problems and crises for the family system in that he/she imposes financial pressures on account of therapeutic cares or special medical movements. Notwithstanding, in ages at which a normalized child can be left alone for self-learning, a mentally retarded child still needs daily cares. Provision of such facilities for a child with uncontrollable behaviors is impossible.

Familial disputations, marital conflicts, divorce, high economic pressures, resistance against others' sarcastic mouth about the retarded child, etc., are among demonstrations of presence of a mentally retarded child in a family (Malek Pour et al., 2008). Such problems often lower the tolerance threshold of parents and other family members, reducing their adaptive status toward both each other and other society members. In addition to above-mentioned problems provoked by mentally retarded children, there are other such crises as obstinacy, disobedience, lack of perception of the family's conditions, shortage of proper communication with others, uncontrolled anger, failure to comply with the rights of others, etc. Endangerment of families' mental health leads to increased social problems. Therefore, plans to increase a mentally retarded child's adaptability not only augment his/her adaptability levels, but also add to familial and societal health. Considerable is in our present community the number of mentally retarded children, for whose betterment different branches of sciences and industrialization have failed to do anything. All such factors contribute to the importance of necessity of taking serious measures to promote society's mental health, reduce economic, social, and emotional stresses, and, in the end, improve such children's adaptability levels.

# **Purposes of the Research**

- 1. Determination of effect of play therapy on increased adaptability skills of children;
- 2. Determination of effect of play therapy on increased anger controllability of children;
- 3. Determination of effect of play therapy on improvement of children's social relationships;
- 4. Determination of effect of play therapy on responsibility senses of mentally retarded children;
- 5. Determination of effect of play therapy on improvement of physical performance of mentally retarded children.

## **Questions of the Research**

- 1. Do games result in increased adaptability skills in mentally retarded children?
- 2. Do games play a role in increased adaptability skills in female mentally retarded children?
- 3. Do games play a role in increased adaptability skills in male mentally retarded children?
- 4. Are games effective in increased anger controllability of mentally retarded children?
- 5. Are games effective in improvement of proper social relations made by mentally retarded children?
- 6. Are games effective in increased reasonability levels of mentally retarded children?

7. Are games effective in improvement of physical performance of mentally retarded children?

### Hypotheses of the Research

- 1. Play therapy is effective in increased educational progress of mentally retarded children.
- 2. Play therapy is effective in increased adaptability levels of female mentally retarded children.
- 3. Play therapy is effective in increased adaptability levels of male mentally retarded children.
- 4. Play therapy is effective in increased proper social skills of mentally retarded children.
- 5. Play therapy is effective in increased anger controllability of mentally retarded children.
- 6. Play therapy is effective in increased responsibility levels of mentally retarded children.
- 7. Play therapy is effective in increased physical health of mentally retarded children.

## Methodology of the Research

The present study was conducted in pretest/posttest modes with control group. The researcher intends to investigate the relationship between play therapy and adaptability levels of mentally retarded children using pretest/posttest. In this research, adaptability levels of experimental and control groups are measured for two times: once before the play therapy and once after it. Experimental group is exposed to independent variable, i.e., adaptability instructions by play therapy, while control group is left uninstructed.

#### Statistical Population and Sampling Method

Statistical population of this research includes all male and female first-year elementary school and preschool mentally retarded children at Dastgheyb School in Esfarayen town (15 male and 21 female students, amounting to 36 ones). To select the samples, those students who were found by their teachers as significantly low in terms of their adaptive performance were firstly selected. 27 students were introduced by teachers as those with low or very low adaptability. To ensure teachers' accurate judgments, parents of related students were invited to the school, from whom only 26 families accepted our invitation and completed the questionnaires. Six families, moreover, presented erroneous questionnaires, which were thus put aside. Remaining twenty persons were divided into two 10-member groups: 10 persons in experimental group and 10 persons in control group. Random sampling method was used in this research. Since this research required cooperation between school officials/parents as well as provision of needed facilities and spaces, availability of subjects was taken into vigilant account.

First of all a briefing session was arranged for attending parents, to whom sufficient scientific information was presented. Questionnaires were, then, delivered to parents and they were asked to read carefully the items and choose the option which best describes their children's behaviors. Then, 20 students with the lowest adaptability scores were selected and assigned randomly to the two groups, after uniqueness of their statistical indices such as IQ and adaptability levels were ensured. The experimental group was, afterwards, exposed to the play therapy, arranged in 6 weeks, 18 sessions, in form of incomplete games, oral plays, and representations. Subjects were actively engaged in games through asking questions about games.

After initial discussions about probable solutions for game conduction and making decisions thereon, the rest of the game was performed for them. At the end of the session, main points were reviewed. This research included six games, each of which was repeated in three sessions due to high volatility of the games for such group of students. In the first session, the therapist recited the game for subjects and main points were discussed at the end of the session. The games in the second session were performed by subjects in a representation mode. In the third session, finally, the games were presented in open-ended manner so as to make subjects to think about possible solutions. Parents were asked to discuss to their children about the main points.

Each of the games presented in this research put forward a conflicting situation where the protagonist was expected, investigating the probable outcomes, to single out the best solution. After the last play therapy session, adaptability questionnaire was redistributed to the two groups. In the meanwhile, subjects of the control group experienced 10 sessions of free games, with their content being irrelevant to those of the experimental group's. This could assist us to put under our control the therapist's presence and game experience of the subjects. Since both sexes were participated in the experience, the number of female and male subjects was five in two experimental and control groups. Sessions were designated to take 15 to 30 minutes, which enabled free games to be performed by all subjects together or with the therapist. After 18 sessions, posttest was conducted on all subjects.

# **Instruments to Gather Data**

#### **Adaptability Questionnaire for Children**

This questionnaire has been formulated in 1997 by Dokhanchi to assess children's adaptability levels. It has 37 four-option items (never, occasionally, sometimes, and often) and mothers are to select the one which best explains

their children's temperaments. Items are graded with a score from zero to three as proportionate to the fact whether they are evaluating adaptability or inadaptability. Adaptability level is the criteria whereby each child is scored. The items which evaluate adaptability are 1, 3, 7, 15, 16, 20, 21, 22, 32, 35, 36, and 37. The options *never*, *occasionally*, *sometimes*, and *often* are respectively scored 0, 1, 2, and 3, the contrariwise of which is applied for the items which evaluate inadaptability. Therefore, the minimum and maximum scores gained by a child would be 0 and 111, respectively. Four subareas are used to assess children's adaptability: social relationship, anger controllability, responsibility, and physical health, as follows:

- Social relationship in items 1, 2, 3, 11, 12, 14, 18, 21, 26, 30, 34, and 36 (12 questions)
- Anger controllability in items 4, 5, 6, 8, 9, 10, 13, 19, and 20 (9 questions)
- Responsibility in items 7, 15, 16, 17, 22, 27, 28, 29, 31, 32, 33, 35, and 37 (13 questions)
- Physical health in items 23, 24, and 25 (3 questions)

Validity of the research was reported to be 0.79 using split half method. Cronbach's alpha was employed to evaluate reliability of the research, which was 0.75. To estimate criterion-related validity, Pearson correlation test was calculated to be 0.81.

# **Data Analysis**

Data was, first of all, extracted from the questionnaires and, after being coded, entered in SPSS. Then, measures of central tendency and measures of variability (average and SD) were examined in experimental and control groups using descriptive statistics. Covariance analysis was, finally, employed to make statistical arguments and test hypotheses.

#### **RESULTS**

#### Descriptive statistics

Table 1: statistical indices of the social adaptability and the subscales thereof in pretest and posttest stages

		Pretest					
Social adaptability and the subscales thereof	Contr	ol group	Experimental group				
	Average	SD	Average	SD			
Social adaptability	57.40	11.520	57.20	10.942			
Proper social relation	17.50	3.979	20.50	2.718			
Anger controllability	14.60	14.60 4.169		3.071			
Social responsibility	18.30 7.602		20.20	7.757			
Physical health	7 1.33		6.80	2.936			
		Po	sttest	test			
	Contr	ol group	Experimental group				
	Average	SD	Average	SD			
Social adaptability	57.20	11.736	63.80	8.766			
Proper social relation	18.10	4.427	22.60	4.551			
Anger controllability	14.40	3.748	15	2.620			
Social responsibility	18.80	7.223	22.30	7.364			
Physical health	6.80	1.814	6.90	2.998			

As observed above, average and SD for social adaptability in experimental group at pretest are respectively 57.20 and 10.942 and at posttest 63.80 and 8.766. In addition, in the control group, average and SD at pretest are respectively 57.40 and 11.520 and at posttest 57.20 and 11.736. This is understood from the table that average of the experimental group at posttest is increased, the change which has been descending for the control group. Results are indicative of the fact that play therapy leaves a positive effect on social adaptability scores of subjects. They also clearly show an increase in adaptability scores for subjects in experimental group in the posttest. That is while scores of the control group either are fixed or with disorganized changes, which demonstrates positive impact of play therapy on social adaptability.

In the proper social relation subscale, average and SD in control group at pretest are respectively 17.50 and 3.979 and at posttest 18.10 and 4.427. In addition, in the experimental group, average and SD at pretest are respectively 20.50 and 2.718 and at posttest 22.60 and 4.551. In both groups, average has been increased in the

posttest, the increase which is more considerable for the experimental group. Therefore, this is concluded that gam therapy has positive impact on making proper social relation.

In the anger controllability subscale, average and SD in experimental group at pretest are respectively 13.10 and 3.071 and at posttest 15 and 2.620. Also, in the control group, average and SD at pretest are respectively 14.60 and 4.169 and at posttest 14.40 and 3.748. According to the results, increased average in posttest for the experimental group is expressive of the positive impact play therapy leaves on subjects' anger controllability. The number of subjects in each group is 10 and increase in subjects' scores is more apparent at experiential group; that is while, the scores are found to be either decreasing or unchanged at the control group, the findings which support positive impact of play therapy.

In the social responsibility subscale, average and SD in experimental group at pretest are respectively 20.20 and 7.757 and at posttest 22.30 and 7.364. Also, in the control group, average and SD at pretest are respectively 18.30 and 7.602 and at posttest 18.80 and 7.223. This seems that increased average in posttest for the experimental group is expressive of the positive impact play therapy leaves on subjects' responsibility.

In the physical health subscale, average and SD in experimental group at pretest are respectively 6.80 and 2.936 and at posttest 6.90 and 2.998. Also, in the control group, average and SD at pretest are respectively 7 and 1.33 and at posttest 6.80 and 1.814. Although average of the experimental group is increased in posttest and decreased in control group, the changes are too weak to support the argument that play therapy has left a positive effect on subjects' physical health.

#### **Inferential Statistics**

Hypothesis 1:Play therapy is effective in increased adaptability levels of mentally retarded children.

	Sum of squares	Degree of freedom	F-test	Level of significance	Level of imapet
Separated model	1771.181	2	39.839	0.000	0.824
Group	228.831	1	10.295	0.005	0.377
Error	377.882	17			
Total	75354 000	20			

Table 2: Covariance analysis for impact of play therapy on increased adaptability levels of children

According to the results obtained from covariance analysis, there is a significant relationship between education and increased adaptability levels of mentally retarded children. Results show the positive, significant effects of education on increased adaptability levels of mentally retarded children.

Hypothesis 2: Play therapy is effective in increased adaptability levels of female mentally retarded children.

Table 3: Covariance analysis for impact of play therapy on increased adaptability levels of children

Degree of Level of

	Sum of squares	Degree of freedom	F-test	Level of significance	Level of imapet
Separated model	1056.665	2	15.689	0.03	0.818
Group	106.49	1	3.162	0.119	0.311
Error	235.735	7			
Total	37774.000	10			

According to the results obtained from covariance analysis, there is no significant relationship between education and increased adaptability levels of female mentally retarded children.

Hypothesis 3: Play therapy is effective in increased adaptability levels of male mentally retarded children.

Table 4: Covariance analysis for impact of play therapy on increased adaptability levels of male children

	Sum of squares	Degree of freedom	F-test	Level of significance	Level of imapet
Separated model	722.959	2	18.962	0.001	0.844
Group	124.171	1	6.514	0.038	0.482
Error	133.441	7			
Total	37589.000	10			

According to the results obtained from covariance analysis, there is significant relationship between education and increased adaptability levels of male mentally retarded children.

Hypothesis 4: Play therapy increases the levels of making proper social relations by mentally retarded children.

Table 5: Covariance analysis for impact of play therapy on making proper social relations by children

	Sum of squares	Degree of freedom	F-test	Level of significance	Level of imapet
Separated model	252.003	2	29.425	0.000	0.776
Group	31.095	1	7.261	0.015	0.299
Error	72.797	17			
Total	7244.000	20			

According to the results obtained from covariance analysis, there is significant relationship between education and making proper social relations by mentally retarded children.

Hypothesis 5: Play therapy is effective in increased anger controllability levels of mentally retarded children.

Table 6: Covariance analysis for impact of play therapy on anger controllability levels in children

	Sum of squares	Degree of freedom	F-test	Level of significance	Level of imapet
Separated model	160.355	2	45.670	0.000	0.843
Group	15.753	1	8.973	0.008	0.354
Error	29.45	17			
Total	4512.000	20			

According to the results obtained from covariance analysis, there is significant relationship between education and anger controllability levels in mentally retarded children.

Hypothesis 6:Play therapy is effective in increased social responsibility levels of mentally retarded children.

Table 7: Covariance analysis for impact of play therapy on social responsibility levels in children

	Sum of squares	Degree of freedom	F-test	Level of significance	Level of imapet
Separated model	741.482	2	103.206	0.000	0.924
Group	24.655	1	6.863	0.018	0.288
Error	61.068	17			
Total	9497.000	20			

According to the results obtained from covariance analysis, there is significant relationship between education and responsibility levels in mentally retarded children.

Hypothesis 7: Play therapy is effective in increased physical health levels of mentally retarded children.

Table 8: Covariance analysis for impact of play therapy on physical health levels in children

	Sum of squares	Degree of freedom	F-test	Level of significance	Level of imapet
Separated model	100.159	2	81.935	0.000	0.906
Group	0.470	1	0.769	0.393	0.043
Error	10.391	17			
Total	1049.000	20			

According to the results obtained from covariance analysis, there is no significant relationship between education and physical health levels in mentally retarded children.

#### **Discussion and Conclusions**

The present research made attempts to investigate effectiveness of play therapy in treating and lessening the signs of mentally retarded children's inadaptability levels. One of the significant findings of this study was that boys are more influenced than girls. To obtain accurate and generalizable results, we tried to establish equal conditions for male and female groups. In doing so, three key roles were assigned to girls and three other roles to boys.

Results showed that there is significant relationship between play therapy and adaptability levels of mentally retarded children. Simply put, play therapy can improve adaptability levels of such children.

Significant was found to be the relationship between play therapy and adaptability levels of male mentally retarded children, the element which was insignificant for females. According to the results, thus, sexuality is an influencing factor in this regard: males are more influenced than females from play therapies.

There is significant relationship between play therapy and anger controllability levels of mentally retarded children. That is, play therapy is helpful in instruction of the anger appearement techniques to mentally retarded children.

There is significant relationship between play therapy and making proper social contacts by mentally retarded children. That is, play therapy is helpful in elevating the properly-made social contacts by mentally retarded children

There is significant relationship between play therapy and responsibility levels of mentally retarded children. That is, play therapy is helpful in increasing the responsibility levels in mentally retarded children.

There is no significant relationship between play therapy and physical health levels of mentally retarded children. That is, this research gained no evidence supporting the idea that play therapy is helpful in enhancing physical health levels of mentally retarded children.

#### **Suggestions for managers**

On advancement, there are always some who are able to lead the community to prosperity through their signature or an insightful measure. Managers of training centers and education institutes are among those who can take constructive and effective steps in promotion of mentally retarded children through adoption of a positive viewpoint.

There are always must and mustn't in in making changes. There are those who keep closed the windows of optimism, causing a group of people to leave in inertia conditions.

Many individuals, including managers of training centers and education institutes, should take required steps to make possible elevated adaptability of mentally retarded people. To do so, all who are able to take such steps are proposed to:

- 1. Provide results of this research with families and inform them of effectiveness of play therapy in lessening adaptability levels of their children;
- 2. Describe different, diversified game methods for families and demand them to practice and review at home the social concepts with their children;
- 3. Procure required facilities, such as picture cards, for making the play therapy more attractive;
- 4. Inform the education staff, including teachers and instructors, of obtained results;
- 5. Make wide-ranging relations and allow better cooperation for promoted play therapies;
- 6. State Education Officials are suggested to include trainings on emotional capabilities into the curriculums in order to permit improvement of students' social skills as proportionate to their age levels. A retest is proposed to be conducted after six months of the first test to ensure creditability of results.

#### **RESOURCES**

- 1- Bathshow, M. L., Perref, y., Trachtenbery, s.w (1992) caring and coping the family of a child with disabilities. In M.L., & Bathshow, & Y. Perret, Children with disabilities: A medical primer (3ed, pp563-578).
- 2- Evans IM. Testing & diagnosis: Are view and evolution. Critical issues in the lives of people with sever disabilities. First edition.
- 3- Gross man, H. J. (ED). (1983). Manual on Terminology and classification in mental retardation. Washington. DC., American Association on mental Deficiency.

- 4- Haldy MB, Hanzlik J.R.A comparison of perceived competence in child veering between mothers of children with Down syndrome and mothers of children without delay (Education retraining in mental retardation, 1990, 25(2)
- 5- Hallahan, D. p, Kauffman, J.M & pullen,p. C(2009). Exceptional learners (11th.ed). Boston; Allyn & Bacon.
- 6- Smith D. Introduction to special education: testing in an age of opportunity. 4th. Edition. Needhan. Allyn & Bacon: 2001, pp: 36.
- 7- Westwood, p. (2009). What teacher need to know about students with Disabilities. Comber well: ACER press?
- 8- Garrison, Karel C. The Psychology of Exceptional children. New York The Ronald Press company,1950
- 9- Franks, c.m., ed. Behavior therapy: appraisal and status. New york: mcgraw-hill, 1969.
- 10- The British gournal of psychiatry from 1975 to 1976.
- 11- Child psychiatry by kanner, Thomas, Springfield third edition third printing 1962.
- 12- Nowrer, o. h.(1960) lbarning theory and behavior. New York: wiley.
- 13- Dunn,l.m: exceptional children in the schools(2<sup>nd</sup> ed.) .new york: holt, Rinehart& Winston, inc : 1973
- 14- Lililienfild, a.m. epidemiology of mongolism. Baltimore: gohns Hopkins university press: 1969
- 15- Hallaham,d.8g.kauffman,exceptional children: introduction to special education (6<sup>th</sup> ed. ):Virginia: university of Virginia: 1994
- 16- Kohler p.d, b.l. Baker & training A curricular Approach to Springfield third edition third printing 1962.
- 17- Kopp, c.b Behavior therapy: appraisal and status. New york: mcgraw-hill,1969.
- 18- Mereer Introduction to special education: testing in an age of opportunity
- 19- Rarisk,gl, jl widdop exceptional children in the schools(2<sup>nd</sup> ed.). New York: holt, Rinehart
- 20- Masland s.p Karel C. The Psychology of Exceptional children. New York The Ronald Press company,1950
- 21- Downs,m:"the hearing off down,s individuals" seminars in speech, language and hearing 1980.
- 22- Abroms,k.& Bennett: issues in genetics and exceptional children; new the direction in special education,vol.7,san Francisco;gossey-bass;1981.
- 23- British medical journal. school pehobia,no.2.848.1960.
- 24- The mentally retarded child and the classroom buy Ericson 1968.
- 25- The measurement and appraisal off adult intelligence by the wechsler 1958.