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DEVELOPING THE CREATIVE POTENTIAL AND  
SELF - ESTEEM OF MENTALLY HANDICAPPED  
GREEK CHILDREN : A STUDY OF SEX DIFFERENCES\*

One of several assumptions underlying the work of psychologists who study creativity is that this trait, like most other human characteristics, is a capacity which all persons possess to some degree, except in the case of pathologies (Crutchfield 1966, Maslow 1959, Rogers 1959). Researchers dealing with creativity confirmed this assumption when they found that intelligence appears to be far from a reliable predictor of creativity (e. g. Getzels & Jackson 1962). School intervention studies applying various creativity training programmes have shown that creative thinking potential can be developed by providing conditions which stimulate and nurture it (Britton 1967, Callahan 1973, Covington & Crutchfield 1965, Feldhusen, Bahlke & Treffinger 1969, Khatena & Dickerson 1973, Meadow & Parnes 1959). An implication of previous research on the nature and nurture of creativity is that schools should provide training to increase the creative abilities of all learners. In maximizing his creative thinking potential, the individual would prepare himself to become more flexible so as to cope with the rapidly changing demands of our society in work and daily life. It is, therefore, very surprising that few intervention studies in creativity have been carried out with the mentally handicapped (MH) child, who has frequently been described as displaying limi-

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ted adaptive mechanisms. Studies dealing with personality traits assumed to be relevant to the MH child's creative performance, such as self - esteem -- which on theoretical grounds is thought to be low in such a child (Goldstein & Seigle 1961) -- have been noticeably absent in the literature of creativity research.

#### RELATED RESEARCH

Evidence from creativity research of the past two decades suggests that all individuals, regardless of their other abilities, possess creative capacity to a greater or lesser degree. Controversy exists in the literature concerning the extent to which creativity tests correlate with intelligence test scores in children; studies with unselected populations (Allen, Dacey & Madaus 1969, Bowers 1960, Dacey and Madaus 1971, Hudson 1966) and homogeneously grouped children (Ripple and May 1962) have shown low positive or no significant correlation between intelligence and creativity measures. In particular, Taylor and Holland (1967), in reviewing the related literature, concluded that the majority of studies suggest that the relationship between creativity and intelligence is positive but low (.20 to .40) in heterogeneous populations and zero or even negative for homogeneous samples at high levels of intelligence. Similarly, in his review of several related studies, Torrance (1966) reported that 178 coefficients of correlation yielded a median score of .20 between these two constructs.

When comparing the productive thinking abilities of MH children in special classes with those of both MH children in regular classes and intellectually normal children, Tisdall (1962) found no significant differences among the three groups in the nonverbal measures of productivity. Similar findings have been reported in comparative studies conducted by Kelson (1965), Smith (1967), and Stern (1963). Another investigation by Bufmire (1969) found that MH children scored significantly higher than their intellectually normal peers on non-verbal measures of creativity. Cawley and Chase (1967),

on the other hand, reported no significant differences between MH and non - MH children in their productive thinking abilities as measured by a variety of productive thinking tasks.

Very few intervention studies in creativity involving MH children suggest that the creative thinking potential of these children may be enhanced through systematic experiences in creative thinking activities. When working with a series of predominantly brainstorming - oriented lessons designed to increase the productive thinking abilities of MH children, Rouse (1965) reported significant improvement on both verbal and non-verbal measures of creativity. The work of Ladner (1971) with the same lessons in a sample consisting of institutionalized adolescents yielded similar results. Another study by Ross and Ross (1973) involving practice in general problem-solving skills indicated that MH children can benefit from formal problem solving training. Another study by Ford (1975) found significant improvement in creativity among MH youngsters through the use of a systematic set of training activities, such as those appearing in the Mark 1, New Directions in Creativity (NDC) programme (Renzulli 1973). Pinkerton (1979), however, reported no significant changes in the self-esteem of MH adults as a result of a personal problem solving programme.

With one exception, these investigations have not involved work with any systematic creativity training activities. The only exception was Ford (1975), who applied a number of such activities from the Mark 1, NDC programme; her sample consisted of subjects taken from different classroom settings in Special Education.

The present study was an attempt to enhance the creative thinking potential and self-esteem in MH Greek children drawn from special classroom settings through training in the entire set of creative thinking activities in the Mark 1, NDC programme; thus providing

them with more practice in creative thinking skills. This programme consists of 48 spirit masters (24 distinct activities) and teacher's guides, developed within a specified framework based on Guilford's (1967) Structure of the Intellect Model. An initial evaluation study of this programme (Callahan 1973) established its effectiveness with intellectually normal populations. The effectiveness of this programme on the improvement of creative performance and self-esteem among MH Greek children was evaluated by testing the following six research hypotheses :

1. Work with the systematic set of the Mark 1, New Directions in Creativity (NDC) materials would help mentally handicapped (MH) children to achieve higher scores on a selected number of Torrance Tests of Creative Thinking (TTCT).
2. Male MH children who had worked with the Mark 1, NDC materials would not generally achieve higher scores on a selected number of TTCT than female MH children who had also worked with these materials.
3. Exposure to the Mark 1, NDC materials would improve the MH children's subjective self-esteem as measured by Coopersmith's Self-Esteem Inventory (SEI) scale.
4. Male MH children who had worked with the Mark 1, NDC materials would not rate themselves higher in the SEI scale than female MH children who had also worked with these materials.
5. Exposure to the Mark 1 NDC materials would improve the MH children's behavioral self-esteem as measured by Coopersmith's Behavioral Rating Form (BRF) scale.
6. Female MH children who had worked with the Mark 1, NDC materials would be generally rated higher by their teachers in the BRF scale than male MH children who had also worked with these materials.

## SUBJECTS

The subjects for the present study consisted of 90 mid-

dle and upper grade MH children from special state schools in the urban areas of Athens, Piraeas, Patras, and Jannina in Greece. Although each school has been established as an independent educational unit called officially «special school», each is basically a parallel special class (Paraskevopoulos 1979). Since in each such school only one teacher is used to teach the middle and upper grade MH children as a group, the total number of classes involved were equal to the number of special schools participating in this study (N=17). Of the 17 special schools (classes), 8 were randomly assigned to the experimental group and the remaining 9 schools (classes) were designated as the control group. Each group included an equal number of subjects (N=45; experimental group: 32 boys and 13 girls; control group: 31 boys and 14 girls). All of the MH children were enrolled in self-contained special education classes, and the great majority of special schools shared the same buildings with primary state schools for intellectually normal children. The IQ range of the sample population was 50 to 80 and the children ranged in age from 10 to 16. Over 90 percent of the children's fathers were unskilled and skilled workers corresponding to the first two categories of socio-economic status in Greece (National Statistical Service of Greece 1975a).

Teachers of the special schools (classes) assigned to the experimental group were provided by the experimenter with the Mark 1, NDC book and complete sets of creativity training activities for the children's use. The author translated the NDC materials into Greek and also made some modifications in order to make them suitable for use with MH Greek children. Each teacher was asked to use the NDC activity sheets in his classroom three times per week for a period of 16 weeks. Classes in the control group continued regular classroom activities during the experimental period.

Teachers of the control group were informed that their classes were taking part in this experiment and that the performance of their pupils would be used as a

check on the usefulness or not of the experimental programme. It was hoped that this approach together with the pre-and post-test assessments which necessitated visits and discussions with these teachers would reduce the Hawthorne effect, if not eliminate it completely.

**EXPERIMENTAL DESIGN** - A Pretest - Posttest Control Group design (Campbell and Stanley 1963) was used for this study. The rationale for choosing this design lies in the fact that «this is perhaps the most frequently used design in social science research and fortunately often interpretable» (Cook & Campbell 1979; p. 103). In some studies, however, the Posttest-only Control Group design was employed. But in such a design «it is difficult to give up 'knowing for sure' that the experimental and control groups were 'equal' before the differential experimental treatment» (Campbell and Stanley 1963; p. 25).

Following then, a Pretest-Posttest Control Group design, at the beginning and end of the 16 week period, the experimenter personally administered to both groups a battery of verbal and figural subtests selected from the Torrance Tests of Creative Thinking (TTCT) (1968 rev.) and a Self - Esteem Inventory (SEI) designed by Coopersmith (1967) to measure subjective self - esteem. This personal administration of the tests helped to insure uniformity of test procedures for all subjects. Teachers in both groups were also asked to complete a Behavior Rating Form (BRF), designed likewise by Coopersmith (1967), to measure the children's behavioral self - esteem prior and subsequent to the training period. At the end of the training period, teachers and children of the experimental group were asked to complete Teacher and Pupil Questionnaires, respectively, which had been designed to assess their opinions of the programme.

The rationale for using TTCT stems from the fact that they have been employed and found applicable in

several creativity studies with MH populations.

The verbal creativity tests were : Product Improvement (Form B), Unusual Uses (Form B), and Just Suppose (Form A). The figural creativity tests include the complete set of Form A, namely, Picture Construction, Picture Completion, and Lines. Verbal creativity tests and the Self - Esteem Inventory were administered individually, while figural creativity tests were done in small groups.

Because of the verbal handicap of MH children coupled with the lack of established norms for measuring their creative thinking potential, the investigator decided to disregard the fixed time limits imposed for all creativity and self - esteem measures by their authors. The experimenter allowed the children as much time as they needed for each of the creativity and self - esteem measures. He also gave writing and spelling assistance to individuals who requested it for figural creativity tests and Self-Esteem Inventory. Responses to the verbal creativity tests were noted by the experimenter. The creativity tests instruments as well as the self - esteem scales used for this study were translated into Greek by the author of this study, who also altered test instructions. Torrance' (1968 rev.) and Coopersmith's (1967) scoring procedures were used by the two scorers (i.e. the experimenter himself and a secondary school teacher interested in the area of creativity) for the creativity tests and self - esteem scales, respectively.

In order to provide a more reliable estimate of the research findings and to minimize the influence of the teachers on the children's performance and behavior, it was decided to use the school mean scores as the statistical unit for comparisons between schools and the individual pupil scores for comparisons within schools (i. e. sex differences). In order to assess the effectiveness of the Mark 1, NDC programme, Analysis of Variance (ANOVA) using the GLIM program-

me (Baker and Nelder 1978) was applied to the pretest and posttest data with the variables of teaching programme, school, sex, and sex by teaching programme treated as sources of variation. ANOVA based on the GLIM programme with the same sources of variation was also applied to the pretest data only, in order to assess the initial comparability of the two groups, although random procedures had been used for assigning them to either an experimental group or a control group. In addition, responses to the Teacher and Pupil Questionnaires were tabulated and summarized for the experimental group to obtain further information on teacher and child attitudes towards the training materials.

## RESULTS

### Scores on creativity tests

At first, in order to assess the initial comparability of experimental and control groups, an ANOVA was conducted for each creativity and self-esteem variable in the pre - test data using the GLIM programme with the four variables, previously mentioned, treated as sources of variation. The only significant difference between the two groups existed with the variable of sex on the verbal fluency measure ( $F=4.54$ ;  $p .05$ ;  $df=1,71$ ).

As already mentioned, Torrance's verbal and figural creativity tests were used to determine whether the Mark 1, NDC programme led to improvement in the children's creative performance. Tables 1 and 2 present the means and standard deviations of scores in pretest and posttest measures on the three verbal and three figural tests of creative thinking, respectively, for experimental and control groups.

Tables 1 and 2 about here

Inspection of these tables reveals that the means for all measures except two (figural flexibility and figural elaboration) differed widely between the two groups, with the experimental group consistently attaining the greatest score in five of the seven



cases. An ANOVA was also performed for the pretest-posttest data separately for each creativity variable, using the GLIM programme with the teaching programme and school treated as sources of variation. The ANOVA yielded for the verbal and figural measures the following  $F$  ratios ( $df=1,15$  for all measures): Verbal Fluency ;  $F=43.85$ ;  $p. 01$ , Verbal Flexibility:  $F=34.26$ ;  $p. 01$ , Verbal Originality :  $F=12.32$ ;  $p. 01$ , Figural Fluency:  $F=6.73$ ;  $p. 05$ , Figural Flexibility :  $F=3.97$  (not significant), Figural Originality :  $F=7.17$ ;  $p. 05$ , and Figural Elaboration :  $F=.16$  (not significant). These data indicate that the Mark 1, NDC programme had the greatest effect on the children's verbal creativity measures. As previous related studies with MH children demonstrated (Smith 1967, Tisdall 1962), these children exhibit greater deficiencies in verbal as opposed to nonverbal creative thinking abilities.

#### Changes in self-esteem

As already mentioned, it was predicted that exposure to the Mark 1, NDC materials would improve MH children's subjective and behavioral self-esteem as measured by Coopersmith's Self - Esteem Inventory (SEI) and Behavior Rating Form (BRF), respectively. Table 3 presents the means and standard deviations of scores in pretest and posttest measures on the two self-esteem scales for experimental and control groups.

Table 3 about here

As this table shows, the two groups differed greatly in means of the subjective self-esteem measures, with the experimental group attaining the higher score. In contrast, means of the behavioral self-esteem measures were approximately the same for both groups. When an ANOVA was performed for the pretest - posttest data separately for each self-esteem variable using the GLIM programme with teaching programme and school treated as sources of variation, the  $F$  ratios obtained were:

subjective self - esteem :  $F=11.19$  p. 01 (df=1,15), and behavioral self - esteem :  $F=1.09$  (not significant). This indicates that there was significant improvement in children's subjective self - esteem, probably as a result of the creativity training programme to which they were exposed.

**Sex differences in creative performance and self-esteem** It was hypothesized that male MH children who had worked with the Mark 1, NDC materials would not achieve higher scores on Torrance's creativity tests than females who had also worked with these materials, that males would not rate themselves higher in the SEI scale than females, and that females would be generally rated higher by their teachers in the BRF scale than males both having worked with these materials. Tables 4 and 5 present the means and standard deviations of scores in pretest and posttest measures on verbal and figural tests of creative thinking, respectively, considered separately for males and females of experimental and control groups. Table 6 presents the same kind of information relative to the two self - esteem scales.

Tables 4, 5, and 6 about here

As is evident from these tables, means on all measures did not differ widely, for both groups attained approximately the same mean scores in every case. An ANOVA was performed for the pretest - posttest data separately for each creativity and self - esteem variable using again the GLIM programme with the variables of school, sex, and sex by teaching programme treated as sources of variation. This ANOVA resulted in insignificant  $F$  ratios for all measures, indicating thus that the programme was perhaps equally effective for both sexes.

The pupil and teacher questionnaires used to assess experimental group reaction to the Mark 1, NDC mate-

rials showed a positive response to the creative activities. Although these activities proved to be effective in enhancing creative thinking potential and subjective self-esteem in MH Greek children, the teachers of the experimental group proposed a number of possible modifications to make the Mark 1, NDC programme more suitable for these children<sup>1</sup>.

**DISCUSSION** The findings of this study demonstrate dramatic improvement in creativity test performance of the experimental group. It was found that significant differences between the experimental and control groups existed in five out of the seven creativity factors; no significant differences were found for two factors, i.e. figural flexibility and figural elaboration. The programme affected mostly the subject's verbal fluency, followed by verbal flexibility and verbal originality. In contrast, Ford's (1975) study indicated that activities of this programme had the greatest effect on the subject's verbal flexibility, with significant effects on verbal originality and verbal fluency. This discrepancy in findings might be due to the following reasons: (1) The sample of Ford's study was not in fact homogeneous as it consisted of subjects drawn from different classroom settings in Special Education; (2) Ford used part of the Mark 1, NDC materials in her study, while the present study used the entire set of materials; (3) different creativity tests were used by the two studies; (4) the American culture in which Ford's subjects live pays perhaps greater attention to the individual's flexible development than does Greek society.

The greatest effect being on the subject's verbal fluency might be attributed to the notion that the Mark 1,

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1. Due to space limitation, we are unable to report the large amount of data that resulted from teacher and pupil questionnaires. Persons interested in such data are invited to contact the author.

NDC programme attempts «to capitalize on the fluency principle (i.e. brainstorming technique) by including a number of exercises that generate a large number of responses» (Renzulli 1973; p.8). That the greatest differences between the two groups are in verbal creativity rather than figural test scores may be explained on the grounds that the programme appears to be heavily loaded with exercises requiring verbal skills. Moreover, the curriculum design used on a tentative basis by special schools throughout Greece has been directed to the development of MH children's verbal skills. One could further explain such an effect as related to the dominant prejudice of Greek people that MH children cannot be trained to become somewhat flexible and original. Such prejudice might influence the way these children are raised within the family environment, as well as the methods of educating them in special schools in Greece.

The two groups did not significantly differ in figural flexibility and figural elaboration measures of creativity for two possible reasons: Either the programme was not sufficiently loaded with nonverbal (drawing) activities, and/or the insensitivity of the nonverbal instruments precluded efficient differentiation of the two groups on the flexibility and elaboration factors of creativity.

It was also noteworthy that, as a possible result of the programme, the experimental group children developed significantly more positive self-esteem, as rated by themselves, than did the control group. Such an indication implies that increased opportunities in the classroom for developing creative thinking abilities might produce a gain in positive subjective self-evaluative behavior among MH children. This conclusion appears to be of major importance since it has been theorized (Goldstein and Seigle 1961) that MH children are characteristically prone to self-devaluation, partly as a result of the failures they have experienced.

The evidence, on the other hand, that the programme did not significantly affect the experimental MH children's behavioral self - esteem may be explained in two ways. Possibly, behavioral manifestations of self - esteem in these children in and out of the classroom were inadequate thus causing some difficulties for their teachers in faithfully portraying the children's behavior as manifestations of their prevailing self - appraisals. Then again, even if such behavior was adequate, an unconscious distortion might have occurred in the behavior ratings by the teachers due to prejudice. From the theoretical standpoint, however, it has been stated that «it is significant that the subjective experience of esteem, rather than the behavioral assurance or discrepant personality, that is most clearly related to... creative behavior» (Coopersmith 1967; p. 63).

The indication besides that no sex difference existed in either the MH children's creativity test performance or their self - esteem ratings was not in fact surprising, in that there appears to be contradictory research evidence regarding this issue. Torrance (1963) attempted to interpret sex differences in creative performance of intellectually normal children in terms of sex identification and differential treatment of the sexes. In general, he and his associates have found few sex differences below the fourth grade level in samples drawn from various places in the United States; beyond this level, however, when sex identification emerge rather strongly, girls usually excel boys in creativity, a situation consistent with the greater emphasis American society places in the verbal development of girls rather than boys. If this is so, the findings of the present study on this issue should be interpreted to mean that either it takes a long time for MH children (longer than for intellectually normal children) to become extremely sensitive about sex identification, and / or differential treatment of the sexes among these children does not appear strong enough in Greek society to

basically determine the level of their creative functioning.

The indication of this research that creativity and self-esteem of MH children might be improved through systematic experiences in creative thinking activities has some interesting implications for curriculum development and educational reform in Greek special schools. In particular, creative work in the classroom might change the attitudes of teachers in a positive manner, and it is possible to broaden the teaching of MH children in the Greek system to include divergent thinking as well as teaching the basic skills of literacy and numeracy. Moreover, the chief function of special education in Greece should be the fullest development of these children taking into account their needs as well as the needs of society in which they live. More specifically, children should be encouraged to develop their mental abilities through a systematic creativity training programme emphasizing the use of brainstorming technique in problem solving situations. Further, they should be able to acquire, perhaps more easily, basic skills (e. g. reading, writing) through participation in Greek language activities included in a creativity training programme. The selection of content besides to be covered in creative thinking activities should be based on children's immediate experiences in home and at school.

Creative work in the classroom, on the other hand, might also change the affective domain of MH children by altering their school interests, enhancing their attitudes toward self and school, and improving their personal, social, and occupational adjustment; such work helps these children become more flexible and raises their self-esteem.

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Table 1

Means and standard deviations of scores in pretest and posttest measures on three verbal tests of creative thinking for experimental and control groups.

VARIABLE	EXPERIMENTAL GROUP				CONTROL GROUP				TOTAL			
	Pretest		Posttest		Pretest		Posttest		Pretest		Posttest	
	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s
Verbal Fluency	9.31	4.17	21.51	6.6	9.76	5.9	8.8	3.27	9.53	5.08	15.16	8.23
Verbal Flexibility	6.73	2.92	12.29	3.68	6.64	2.96	5.82	2.45	6.69	2.92	9.06	4.5
Verbal Originality	2.56	2.51	6.76	5.03	2.29	3.04	2.09	2.15	2.42	2.78	4.42	4.51

Table 2

Means and standard deviations of scores in pretest and posttest measures on three figural tests of creative thinking for experimental and control groups.

VARIABLE	EXPERIMENTAL GROUP				CONTROL GROUP				TOTAL			
	Pretest		Posttest		Pretest		Posttest		Pretest		Posttest	
	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s
Figural Fluency	20.13	9.23	27.47	8.94	19.22	8.68	20.33	9.22	19.68	8.92	23.9	9.72
Figural Flexibility	14.47	6.31	18.82	4.79	14.56	5.56	15.89	5.8	14.51	5.91	17.36	5.46
Figural Originality	29.09	16.58	42.58	17.4	28.16	14.89	29.87	15.84	28.62	15.68	36.22	17.74
Figural Elaboration	22.79	17.45	22.24	12.66	20.67	14.98	18.67	13.17	21.72	16.2	20.46	12.96

Table 3

Means and standard deviations of scores in pretest and posttest measures on two self-esteem scales for experimental and control groups.

VARIABLE	EXPERIMENTAL GROUP				CONTROL GROUP				TOTAL			
	Pretest		Posttest		Pretest		Posttest		Pretest		Posttest	
	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s
Self - Esteem Inventory	26.36	21.16	35.39	24.63	26.11	19.04	18.18	11.21	26.23	20.02	26.74	20.88
Behavior Rating From	9.18	5.51	8.15	4.12	7.36	2.54	7.19	3.39	8.27	4.36	7.67	3.78

Table 4

Means and standard deviations of scores in pretest and posttest measures on three verbal tests of creative thinking for males and females of experimental and control groups taken separately.

VAR	EXPERIMENTAL GROUP								CONTROL GROUP								TOTAL							
	Pretest				Posttest				Pretest				Posttest				Pretest				Posttest			
	Males		Females		Males		Females		Males		Females		Males		Females		Males		Females		Males		Females	
Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	
Flu	9.81	4.02	8.08	4.42	22.47	6.9	19.15	5.34	10.84	6.56	7.36	3.1	9.06	3.01	8.21	3.03	10.32	5.4	7.7	3.74	15.87	8.59	13.48	8.18
Fle	7.12	2.96	5.77	2.68	12.59	3.93	11.54	2.96	8.00	3.21	5.64	2.06	6.1	2.6	5.21	2.04	7.11	3.06	5.7	2.33	9.4	4.66	8.26	4.06
Ori	2.62	2.46	3.38	2.72	7.38	5.5	5.23	3.34	2.61	3.4	1.57	1.95	2.06	1.81	2.14	2.85	2.62	2.94	1.96	2.34	4.76	4.88	3.63	3.42

Table 5

Means and standard deviations of scores in pretest and posttest measures on three figural tests of creative thinking for males and females of experimental and control groups taken separately.

VAR	EXPERIMENTAL GROUP								CONTROL GROUP								TOTAL							
	Pretest				Posttest				Pretest				Posttest				Pretest				Posttest			
	Males		Females		Males		Females		Males		Females		Males		Females		Males		Females		Males		Females	
	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s
Flu	20.19	9.91	20.00	7.66	27.28	9.24	27.92	8.49	18.87	7.87	20.00	10.54	19.19	9.25	22.86	8.97	19.54	8.92	20.00	9.09	23.3	10.04	25.3	8.95
Fle	14.56	6.79	14.23	5.18	18.75	4.81	19.00	4.92	14.74	5.46	14.14	5.95	15.42	6.19	16.93	4.88	14.65	6.12	14.18	5.48	17.11	5.74	17.93	4.91
Ori	29.34	17.98	28.46	13.13	42.25	18.42	43.38	15.24	27.55	15.34	29.15	14.29	27.87	15.46	34.29	16.11	28.46	16.62	29.00	13.49	35.18	18.42	38.67	16.07
Ela	24.31	18.06	19.00	15.88	20.88	12.98	25.62	11.62	20.45	15.78	21.14	13.59	16.9	11.97	22.57	15.24	22.41	16.95	20.11	14.49	18.92	12.55	24.03	13.45



Table 6

Means and standard deviations of scores in pretest and posttest measures on two self-esteem scales for males and females of experimental and control groups taken separately.

VAR	EXPERIMENTAL GROUP								CONTROL GROUP								TOTAL							
	Pretest				Posttest				Pretest				Posttest				Pretest				Posttest			
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females				
Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s	Means	S.D.s			
SEI	24.65	19.71	30.55	24.71	37.04	23.11	31.09	28.59	26.62	18.82	24.98	20.2	18.49	11.81	17.51	10.15	25.62	19.15	27.66	22.23	27.89	20.54	24.05	21.83
BRF	8.47	5.73	10.92	4.69	7.57	3.4	9.59	5.41	7.12	2.72	7.9	2.09	6.49	2.86	8.74	4.04	7.81	4.52	9.35	3.83	7.04	3.17	9.15	4.68