

## effect of behavioural family therapy on behaviour correction and recidivism rate of delinquents in Ahvaz, Iran

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**Abstract**—Behavioural family therapy was successfully applied in the treatment of delinquency with age and socio economic status being the mediating variables. The sample,  $n=124$  from Ahvaz Correction Centre comprised of three subgroups involved with stealing, wickedness and sexual crimes. The study assessed the treatment effects on the subjects' school adaptation, drug abuse tendency and recidivism rate. Results indicated a significant difference between the experimental and control groups among the three variables. Nevertheless, all the subgroups were affected by the intervention regardless of the type of the crime.

**Keywords**—delinquents; behavioural family therapy; school adaptation; drug abuse; recidivism

### I. INTRODUCTION AND PROBLEM STATEMENT

Juvenile delinquency is a social problem present in all societies [1]. The problem appears in personal, family and at the societal level which imposes high preventive and remedial costs in the judiciary and security, rehabilitation, insurance and medical sectors upon the society [2]. Other costs which are even more important are the increase in the illiteracy rate due to truancy and dropout among the children [3], drug abuse tendency as a common behaviour among juvenile delinquents [4], and recidivism [5]. These problems may be transmitted to the next generation; hence transforming them into an intergenerational pattern in the commitment of crime [6, 7].

### II. LITRATURE REVIEW

There are two different trends in the literature in regard behavioural family therapy effectiveness. Numerous studies have reported successful results when it was applied on juvenile delinquents [8, 9, 10]. However, some studies found it less effective especially on adolescents [11, 12]. Accordingly, the treatment is not effective for juveniles with low socioeconomic status [13, 14]. Nevertheless, in this study, considering the result of the previous findings in the literature, the subjects were matched in terms of age, socio economic status and crime in order to determine the effect of the treatment.

### III. METHODOLOGY AND SAMPLING

The statistical universe included all teenagers (13-17) who were sent to the Ahvaz Correction Centre by the

court. A mixed sampling method of proportional allocation and paired matched sampling was used to cover the three groups, wickedness, stealing and sexual crimes. The subjects then matched with respect to their socio economic status and age. Subsequently, they were allocated to the experimental and control groups randomly. The  $n$  for each of the subgroups were, stealing ( $n=24$ ), wickedness ( $n=20$ ), and sexual crimes ( $n=18$ ), thus  $n$  for the control group was 62. The statistical power analysis was initiated with a medium effect size, 0.26,  $\alpha$  level= 0.05 and power 0.8 gave a calculated  $n$  value =124, thus ensuring the reduction of type II error [15].

This study was a true experimental design with four measurements, 1 pre test and 3 post tests were initiated. The measurements were conducted: Before treatment administration as the pre-test, and the other post tests at one, two and three month(s) after subjects were released from the center as the first, second and third post-tests respectively. Each group had seven therapeutic sessions consisting 90 minutes each, during the treatment.

A repeated measures ANOVA and paired sample  $t$  test were applied to analyse the collected data. The intervention, behavioural family therapy, is based on social learning theory which uses behavioural techniques such as reinforcement of pro-social behaviours and modeling new behaviours as effective methods of behaviour modification [16].

Three types of instruments were used for the collection of data in the study, Socio- Economic Status Questionnaire of Monitoring after Release-2000 (SQMR-2000); The Questionnaire of Delinquent's Assessment by Parent-2009 (QDAP-2009); and the criminal recorded data from judiciary system. The SQMR-2000 was used to assess the prisoners' socio-economic status. The validity and reliability of SQMR-2000 according to the Centre's assessment were 0.78 and 0.83 respectively [17].

The second instrument was the QDAP-2009 constructed with 14 items and 2 subscales, being the school adaptation and drug abuse tendency. The concurrent method of validity was utilized with an overall validity coefficient of 0.705. The validity coefficient for school adaptation and drug abuse tendency were 0.801 and 0.602 respectively. Also, data were taken from the Judiciary System Information Centre to test the effect of the intervention on the recidivism rate.

#### IV. FINDINGS

The subjects mean age were 15.2 with a range of 13-17. The mean of children's education was 6. Parents belonged to the lower class category with low paid jobs. The mean of fathers' education level was 8, while for mothers was 5. The mean of the family population was 6.4; and the mean of relatives who lived with the family was 1.2.

Homogeneity test of the groups showed no significant difference,  $t(61) = 0.899, p = 0.372$ ;  $t(61) = 1.158, p = 0.251$  for socio-economic status and age respectively. Also, the Duncan and Student-Newman-Keuls tests of homogeneity showed no significant difference between the subgroups.

The achieved value to test the effect of the treatment on school adaptation was,  $F(1,116) = 100.142, p < 0.001$ . The intervention led to a significant change in the experimental group.

The Bonferroni method was used in analyzing the comparison groups for school adaptation. The result showed a cumulative trend. The best result, 0.696, was achieved for the third comparison between the first and the final assessments of the treatment. The achieved value to assess the difference between the criminal subgroups in terms of school adaptation was,  $F(2,116) = 0.7, p = 0.499$ , indicating a non significant effect. Also, the pair wise comparisons between the subgroups did not show any significant difference.

The achieved value to test the effect of the treatment on drug abuse tendency was,  $F(1,116) = 120.750, p < 0.001$ . Thus, indicating a significant difference between the groups. The best result was achieved in the last measurement which implied the needed time required in considering positive effect of the treatment.

In a test on the effect of the treatment on the recidivism rate, the achieved value was,  $t(61) = 2.383, p < 0.02$ . This result indicated that subjects in the experimental group changed significantly compared to the control group. Less subjects from this group were imprisoned again compared to the control group. In order to identify which criminal subgroup benefited more from the treatment, the comparative values were analysed, wickedness (control) versus wickedness (experimental),  $t(20) = -0.468, p = 0.645$ ; sexual crimes (control) versus sexual crimes (experimental),  $t(17) = 2.360, p = 0.031$ ; and stealing (control) versus stealing (experimental),  $t(22) = 2.590, p = 0.017$ . Consequently, the difference between the wickedness subgroups was not significant, but for the sexual crimes and the stealing subgroups, significant differences were observed.

#### V. DISCUSSION AND CONCLUSION

The experimental group benefited from the intervention and showed a significant difference compared with the control group. The results showed significance for all subjects in the experimental group regardless of the criminal subgroups which they belonged. In other words, all subjects regardless of their committed crimes benefited

from the treatment in a similar way. While there is a trend in the literature which says children at an early age can be affected more compared to adolescents, the results of this study, however, showed significant differences in school adaptation, drug abuse tendency and also reduction in the recidivism rate among the adolescent delinquents.

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