Effect of Behavioural Family Therapy on Juvenile Delinquents' Relationship in Ahvaz Correction Centre (Iran) and Role of Age on the Process

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Abstract

This study aimed to determine the effect of behavioural family therapy with the juvenile delinquents and also role of age in this regard. The assessed variables consisted of relationships with siblings, peers, and parents as well as re-arrestment. A mixed sampling method, proportional allocation, and paired matched sampling were applied. A sample, with an equation of n=124, was taken from Ahvaz Correction Centre which assigned to the experimental and control groups (62 subjects in each group). There were three subgroups of thieving (24), physical aggression (20) and sexual crimes (18) in each of the groups. Instruments included a socio- economic status questionnaire, child's assessment by parent, and judiciary recorded data. The collected data were analyzed by applying repeated measures ANOVA, paired sample t-test and Pearson's correlation statistics. Accordingly, significant differences between the experimental and control groups in all variables were observed. However, all

the subgroups, except in case of re-arrestment, were affected by the therapeutic intervention regardless of the criminal subgroup.

Keywords: Behavioural family therapy, Juvenile delinquents, Age, Ahvaz City

1. Introduction

Delinquency and conduct disorder are the largest group of mental disorders which referred for treatment (Kazdin, Siegel, & Bass, 1990; Van Scott, Spender, Doolan, Jacobs, & Aspland, 2001), and have a destructive prognosis (American Psychiatric Association, 2000; Sue, Sue, & Sue, 2008). In fact, externalizing disorders are the most costly of all psycho-social problems during childhood (Dretzke, Frew, Davenport, Barlow, Stewart-Brown, Sandercock, Bayliss, Raftery, Hyde, Taylor, 2005; Kazdin, 1997) and also have implications in terms of socio–emotional harm for teenagers and fiscal costs on society (Biglan et al., 2004).

Due the effect of the problems and also the high rate of recidivism among juvenile delinquents, which is up to 90% during one year (Snyder, 1998), using effective approaches for the disorders is an urgent issue. Although, evidence-based approaches have been successfully used, among them, the behavioural family therapy (BFT) is well-known; however, not all reported cases were successful. In the following, both successful and unsuccessful cases will be provided.

BFT is a relatively new approach that originates from research involving the modification of children's behaviour by parents (Horne & Sayger, 2000). The approach includes application of behaviour therapy in the family context. According to the approach, family members, especially parents, can play an important role in the process. During the therapeutic sessions, with applying techniques such as role playing, contracting and social skills training as well as appropriate using of reinforcement for their children, parents learn new skills and change their wrong patterns of dealing with the children. The approach has been successfully used for externalizing disorders, such as, childhood conduct disorder (Brody, Kogan, Chen, & Murry, 2008; Connell, Dishion, Yasui, & Kavanagh, 2007; Hutchings, Lane, & Kelly, 2004; Nixon, 2002; Welsh & Farrington, 2006), delinquency and its components (Farrington & Welsh, 2003).

Even though there were many research reports indicating successful results of behavioural family therapy application, some evidences of negative results or unsuccessfulness among families and their children as the targets of the approach reported (Assemany & McIntosh, 2002; Hutchings et al., 2004 2004; Lundahl , Risser, & Lovejoy, 2006; Van De Wiel, Matthys, Cohen-Kettenis & Van Engeland, 2002).

1.1 The role of age in behavioural family therapy with delinquents

There are several variables which intervene in the behavioural family therapy process and decrease its effectiveness, including socio-economic disadvantage of subjects, parenting characteristics, home and neighborhood status, child's characteristics, and characteristics of the program. Among these variables, age has a critical effect since majority of delinquents are adolescents, which according to some studies, cannot be benefited from the approach. For instance, Hartman, Stage, and Webster-Stratton (2003) found that the approach was not suitable for adolescents. Basically, the period of 12-18 years of age is very important from criminology viewpoint. For example, a lot of adult prisoners have criminal records during childhood and adolescence (Dretzke et al., 2004, sue et al., 2008).

McCart, Priester, Davies and Azen (2006) found that behavioural family therapy had a significantly higher effect than other approaches in a subset of studies with participants aged 6 to 12 years of age. In line with this finding, Brestan and Eyberg (1998), believe that age is an intervening variable for the approach and BFT is more effective for younger children (preschool age) than adolescents. In addition, Kazdin (1995) reported that the treatment was effective for 63% of children from 3-6 ½ years of age, and less effective at 27% to those children from 6 ½-12 years of age. Lundahl et al.(2006) showed that in general, the approach is a robust intervention to modify disruptive child behaviour in the early age, 5-12. Although greater benefits were found for younger children compared to older children; however such differences were not statistically significant. Counter to these findings, Serketich and Dumas (1996) reported a positive correlation between age and desirable outcomes, r=.69, i.e. the intervention was more effective for older groups. However, Cedar and Levant (1991) found no relationship between the variables of age and behaviour correction after a course of BFT. Woolfenden, Williams and Peat (2002) reviewed the effectiveness of the approach on reducing delinquency and its consequences in a meta-analysis of children in range of 10 -17. The researchers reported a drastic decrease in re-arrestment up to 62%, and significant reduction in the time spent by juvenile delinquents in the disciplinary institutions and also running away from home. Farrington and Welsh (2003) in a review of BFT studies (children under 10) found a decrease of 35% in median of offending behaviours in the experimental compared to the control group. Harris

(2007) in a meta-analysis showed that the intervention was effective in reduction of behavioural problem of children with mean age of 6.3 years.

2. Methodology

The statistical population consisted of all adolescents, 13-17 years of age, who were sentenced to stay in the centre by the court. A mixed sampling method includes proportional allocation and paired matched sampling was applied to cover main criminal groups in the centre, physical aggression, thieving and sexual crimes. Initially, the whole sample was selected with regard to the criminal subgroups. Then, subjects were matched to control some effective variables such as socio-economic status and age. Finally, 124 teenagers were chosen, 24, 20, and 18 for subgroups of thieving, physical aggression, and sexual crimes respectively for each of the groups, the experimental and control.

2.1 Research design and procedures

Four different measurements consisting of a pre-test, before treatment, and three post tests in monthly intervals after released from Ahvaz Correction Centre (ACC) were administered. The intervention included seven therapeutic sessions lasting about 90 minutes per session. The average of subjects attendance in the sessions was 9.5 which could cover the intervention and they were trained according to the design.

Intervention: BFT, the applied method was used to show the parents how they can interact in a different manner with respect to consequences of behaviour.

2.2 Subjects' characteristics

The subjects' mean ages were 15.16 and 15.30 for the control and experimental groups, respectively. The educational levels of the subjects were 5.95 and 6.29 like to the above mentioned order. Parents were mainly classified as low socio-economic status with low paying, unskilled jobs and high rate of illiteracy. The mean of the family population of the subjects, for both groups, was 6.4.

The average of the participants' attendance was 6 sessions and attrition rate was .05%, as previously a 6.45% attrition rate was added to the sample it was not effective on the process of data analysis and its validity.

2.3 Instrumentation

Three types of instruments and sources of information were used to gather data. These include: Socio- Economic Status Questionnaire of Monitoring after Release (SES-Q-MAR)-2000, The Questionnaire of Delinquent's Assessment by Parent (Q-DAP-2009), and judiciary recorded data from Information Data Centre of the Judiciary System.

The SES-Q-MAR-2000 was applied to match the subjects, since socio-economic status has been showed a moderating variable in applying the intervention for delinquents. The questionnaire has been used in the prison's system from the year 2000, and indexes of validity and reliability were .78 and .83 respectively (Baratvand & Assadollahi, 2000).

Q-DAP-2009 has 8 subscales; however only three of them were used in this study; siblings, peers and parents relationship with subjects. This questionnaire is self-construct, and each category was covered with six items; validity of the subscales in this study counted as, .80, .82 and .704 for the siblings, peers and parents relationship with subjects respectively. The results were achieved by a panel of professionals including judges, social workers and criminologists who assessed the items. The coefficient indexes with applying Cronbach's alpha for reliability were as .921, .89 and .894 for the variables with the above-mentioned order.

The data was taken from the Information Data Centre of the court system to test hypotheses about the effect of the intervention on the recidivism rate of the subjects.

2.4 Statistical method

The applied statistics method in the study included repeated measures ANOVA, paired matched *t*-test and Pearson's correlation coefficient. At first, a test of homogeneity between the groups, experimental and control was administered. The result for age and SES were: $t\,(61) = 1.158$, p=.251 and $t\,(61) = .899$, p= .372 respectively. Thus the groups were homogenous with respect to the variables. In addition to the *t*. test, Duncan and Student-Newman-Keuls tests of homogeneity were administered which indicated that the subgroups were also homogenous.

Ethical rules in the study were followed as below; as the main role in the study was upon parents, they were asked to sign an agreement for participating in the program and details were described for them exactly. They

had the right to leave the program whenever they need to do that; however the attrition rate was only .05% which can be compared with 6.45% which have had already predicted based on the previous studies.

3. Findings

Referring to the table 1, all the subjects were affected by the intervention; however the subgroups were not different in this regard. The results showed that subjects' relationship with siblings, peers and parents, could change with the effect of the intervention; and all subjects, regardless of the committed crime, were affected similarly. (Table 1).

The comparison of the imprisonment duration of the subjects showed a different trend with the subscales and overall results of the Q-DAP-2009. Despite the lack of significant difference between the criminal subgroups in other variables, imprisonment duration showed significant differences between the groups. Both subgroups of sexual crimes and thieving were affected by the treatment positively; nevertheless, no significant change was observed between the subgroups of physical aggression in the control and experimental groups. (Table 2).

The result of this study showed that age is an important variable in the process of behavioural family therapy. The results for variables such as the overall score, siblings' relationship, and peers' relationship showed that with an increasing in age of the subjects, the effect of the intervention was decreased. However, the relationship between the subscale of parents' relationship and imprisonment duration with the age of the subjects was not significant. (Table 3).

4. Discussion and recommendations

The findings of this study showed some evidences for both trends in the literature. Some studies (Dishion, Nelson, & Bullock, 2004; Hutchings et al., 2004; Kazdin, 1997; Witt & Witte, 2000) showed that the effectiveness of the treatment reduced as the age of subjects increased. However, some researches (Serketich & Dumas, 1996, Welsh & Farrington, 2006; Woolfenden, Williams, & Peat, 2002) found no significant difference between the subjects with respect to the age.

Relationships between age with siblings, peers and total scales were significant which can be counted as a sign of more stable patterns of behaviour among the adolescents.

It seems that parents' role in family leads to utilization of all subjects regardless of their ages, SES and crime. Lack of relationship between period of imprisonment and age of subjects indicated that age was not a moderating variable in this regard. Probably the same mechanism which affects the parent-child relationship leads to a similar result

Several reasons were cited to explain the ineffectiveness of the approach for adolescents. In some cases of behavioural family therapy, the role of children as the main target is ignored or not insisted. Although the situation for younger children, less than 10 years old, is not effective, the adolescents can take a defensive position (Kazdin, 1997). A situation which is called "premature autonomy" intervenes in the therapeutic process and decreases its effectiveness for adolescents. The situation exaggerates for the group who are high-risk. The concept refers to the parental supervision; however, adolescents withdraw from the monitoring and drive towards peers over time (Dishion et al., 2004).

With respect to the results, probably more than one therapeutic protocol is necessary, since younger children and adolescents are in different levels of cognitive development and psycho-social needs. The protocols should determine necessary sessions and hours for each child with respect to age or more specific psycho-social stage of development.

According to Bank, Marlowe, Reid, Patterson, and Weinrott (1991), and Ledley, Huppert, Foa, Davidson, Keefe, and Potts (2005), using a suitable method of reinforcement which is congruent with age and developmental stage of the target children, ends to better results. Probably "behavioural contract" is the most suitable method of reinforcement for adolescents. It seems that with an increasing in age of the target groups, more complicated methods of reinforcement are needed.

Although there was no systematic research about the effect of family members' legal problems on the prognosis of the treatment in this study, the researchers' observations showed that this should be an impressive variable. Moreover, the result of this study showed that the families needed more help and most of the additional contacts (telephone or live) devoted to them. This service was available for the families and they could talk with the researchers about their problems during the research period, 6 months. Hence, the severity of the children's problems should be included in the therapeutic protocol to get the best result. This situation is called "timing of booster sessions" by Eyberg, Edwards, Boggs and Foote (1998).

Another issue which makes adolescents more vulnerable in comparison to younger children is social demand. Adolescents have to follow some disciplinary and academic rules which impose more stress on them; for the reason they need to be more exposed in the therapeutic process. For the children who have problems in school, whether academic or disciplinary, including teachers and peers (if possible) is a practical solution. Hartman et al. (2003) suggested the concept of "secondary risk factors" to explain less effective of behavioural family therapy for adolescents. The concept includes "school failure, social rejection and deviant peer groups" which intervene in the therapeutic results**.** In line with the explanations, Bank et al. (1991) suggested a program which is especially designed for adolescents who experienced imprisonment; they should be monitored with respect to their school attendance, association with deviant peers, drug abuse, and involvement in vandalism. Other components of the plan include suitable methods of reinforcement: using behavioural contract, point system and time out as rewarding systems. Researchers of this study suggest using different therapeutic protocols according to criminal subgroups, since the subgroup of physical aggression was not affected by the treatment in the most objective index, imprisonment durance.

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Table 1. Repeated measures ANOVA results

Source		df	*F* Ratio	*P*
Total	Groups	1	105.311	.000
	Crime	2	1.568	.213
Siblings	Groups	1	78.356	.000
	Crime	2	1.569	.213
Peers	Groups	1	86.223	.000
	Crime	2	1.126	.328
Parents	Groups	1	94.609	.000
	Crime	2	.928	.398

Table 2. Paired sample *t*-test of imprisonment duration

Source		df	*t*	*P*(2-tailed)
Pair1	Groups	1	2.383	.02
Pair2	Physical aggression	20	-.468	.645
Pair3	Sex	17	2.360	.031
Pair 4	Thieving	22	2.590	.017

Table 3. Pearson's coefficient correlations between age and other variables

source	df	*t*	*P*(2-tailed)
Overall score	58	-.359	.006
Siblings' relationship	58	-.36	.006
Peers' relationship	58	-.362	.005
Parents' relationship	58	-.241	.069
Imprisonment	61	.209	.105

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