Impact of Playing Volleyball on Concentration of Institutionalized Female Juvenile Delinquents

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Abstract

The purpose of the study was to ascertain the effect of playing volleyball on concentration of the institutionalized female juvenile delinquents. Training in volleyball game was given to 25 institutionalized female juvenile delinquents for six months. They were compared with a control group of 25 institutionalized female juvenile delinquents, matched for certain extraneous variables such as age, duration of institutionalization etc. Letter Cancellation Sheet to measure concentration was administered to both the groups of institutionalized female juvenile delinquents, periodically once in a month after establishing the base level. An interview schedule was also used to elicit information relating to personal, familial and institutional factors. Since, a longitudinal design with repeated measure was used to collect data, analysis of co-variance, Duncan's multiple range test and the students t-test (for independent groups) were employed for statistical analysis of the data. The results revealed significant positive impact of participation in volleyball game on institutionalized female juvenile delinquents in the enhancement of their level of concentration.

Key words: Juvenile delinquents, Institutionalisation.

Introduction

Sport is as old as human society. It modifies and affects positively the development of personality in several ways. According to Scott (1960) there are seven ways in which physical activity contributes to psychological development: (i) attitudes are changed (ii) social efficiency is improved (iii) improved sensory perception and response accrue (iv) the sense of well-being improves (v) better relaxation is promoted (vi) relief is promoted in psychosomatic problems and (vii) skills are acquired.

Sports are found to reduce delinquency, crime and violence (Singer, 1975). Participation in play and sports promotes positive emotional health and it is found to have significant association with socially acceptable behaviour patterns (Blanchard, 1946; Cowell,1949, Layman,1972).

Volleyball is a team game demanding muscular endurance, power, strength, flexibility, agility, balance and co-ordination. It provides an opportunity to strengthen one's own mental judgement (Cox,1974)

Volleyball being a team game involving all 3 main components namely biological, psychological and social, it can to some extent bring a change among institutionalized female juvenile delinquents. Aggression and delinquency are found to be the products of bio-psycho-social factors (Rajangam, 1957; Shanmugam,1973; Paul 1984). Hence, it was decided to carry out a research study on the effect of playing volleyball as a recreational sport on concentration of institutionalized female juvenile delinquents.

Hypothesis

It was hypothesized that playing volleyball as a recreational sport would significantly enhance the level of concentration among institutionalized female juvenile delinquents.

Methodology

Research Design

The research design used in the present study was a longitudinal one with repeated measures taken before and during intervention with training in volleyball game.

Sample

A total of 50 institutionalised female juvenile delinquents were included in the sample. Their age ranged between 13 and 18 years, with a mean age of 15 years and 6 months. Out of them, 45 were students studying in classes VI to IX and the remaining 5 were from vocational courses such as tailoring and crafting. They all were involved in certain delinquent activities such as wandering, cheating, running away from home, petty thefts, kidnapping and abduction and prostitution. Since, there was no significant difference among these various delinquent conditions, all the subjects were clubbed together and were randomly assigned to experimental and control groups. The duration of their institutionalization ranged from 6 to 10 years, and there was no history of mental illness or any physical handicap. All the 50 subjects did not undergo any other intervention programme along with volleyball training; nor they had undergone any training programme before. Thus, the background factors were kept almost constant for all the 50 subjects included in the study.

Intervention Programme

Intervention in the form of volleyball training was given to 25 female juvenile delinquents who formed the experimental group; the other 25 female juvenile delinquents were not given any training, represented the control group. The subjects in the experimental group were split into 4 teams, with one reserve and each of the four teams had six subjects. Of the 4 teams, 2 teams were allowed to play actively one against the other, while the other 2 teams were retained as reserve teams. On rotation, the reserve subjects were included in the playing teams as substitutes. The extra reserve was also similarly determined on the principle of rotation. No significant difference among the 4 teams, including the reserve player was noticed on the extraneous variables as well as the dependent variable (manifest aggression) before and during the training period. Except on Saturdays and Sundays, all the 4 teams with the extra reserve received training in Volleyball for one and half hours including preliminary exercises daily. Since, the principles of randomization were followed, there was no significant difference in any of the aspects between the two groups, on pre-intervention scores.

Assessment Tools

Letter Cancellation Sheet consisting of all 26 alphabets (in block letters) of the English language presented in a jumbled manner with equal space between any two letters, was used as the tool, for assessment of concentration, besides an interview schedule which was administered for collecting data on personal, familial and institutional details of the subjects.

A total of 120 sessions of training in Volleyball were conducted each lasting for one and half hours. As mentioned in the research design, periodical monthly assessments on concentration were done for subjects in experimental and control groups from base level to the end of the six months.

Results and Discussion

After testing the data for normality and homogeneity of variance, analysis of co-variance, Duncan's multiple range test and students t-test (independent groups) were used for analysis of data.

Table-I(A)
Mean Standard Deviation and T-Values of Experimental and Control Groups on C Concentration from Base Level to Six Months Assessment

Groups	Phases of Assessment													
	Base level		1st month		2ndmonth		3rd month		4th month		5th month		6th month	
	Mean	?	Mean	?	Mean	?	Mean	?	Mean	?	Mean	?	Mean	?
Experimental	48.51	12.01	48.71	13.20	51.83	13.70	58.14	10.67	66.62	10.74	74.20	9.34	79.85	10.08
Control	52.43	11.92	38.04	17.52	50.34	17.68	43.97	19.61	43.66	16.58	42.30	14.66	46.37	13.11
't' values	1.15		2.43		0.33		3.17		5.82		9.21		11.23	
Level of significance	NS		<.05		NS		<.01		<.001		<.001		<.001	

Table-I(B)
Final Analysis of Co-Variance on Concentration from Base Level to Six Months by Experimental and Control Groups

Source of variation	Sum of square	df	Mean square	F	P
Main effects					
Group	21930.33	1	21930.33	125.16	<.0001
Month	12008.49	6	2101.42	11.42	<.0001
Co-variance	8734.92	1	8734.92	49.85	<.0001
2-Way interactions					
Group X month	13737.46	6	2289.58	30.07	<.0001
Residual (Within Group)	58697.82	335	175.22	-	-
Total	115109.02	349	329.83	-	-

Table-I(C)
Duncan's Multiple Range Analysis Scores of Subjects in Experimental & Control Group on Concentration

Experimental								Control							
Asst.	**B.L.**	**1**	**2**	**3**	**4**	**5**	**6**	**Asst.**	**B.L.**	**1**	**2**	**3**	**4**	**5**	**6**
B.L.		*				*		B.L.		*				*	
1								1							
2			*					2		*					
3								3							
4								4							
5								5							
6								6							

It could be inferred for the above 3 tables, that on concentration, there was significant difference in the experimental group on Concentration between baselevel and first month assessment. Though, subjects in the experimental group continued to show steady improvement on concentration only at the end of 5th month again, one could see significant gain on concentration with reference to the 2nd month.

The subjects in the control group showed significant decline on concentration at the end of the 1st month with reference to base level. But, surprisingly significant improvement was noticed between the scores of 1st and 2nd month following baselevel. However, significant gain on concentration was noticed between 1st and 2nd months, did not indicate any significant improvement between baselevel scores and the scores obtained at the end of the 2nd month. Again, from the 3rd month, there was decline in the sores of the subject on concentration. Only at the end of the 5th month, the decline was found to be statistically significant. During the last assessment i.e. after the 6th month, though one could see an increase in the mean score, with reference to the mean score obtained at 5th month, the difference was not statistically significant.

On the whole, there has been steady and consistent upward trend of scores suggesting significant improvement with regard to concentration among subjects in the experimental group. While ups and downs could be noticed in the scores obtained by the control group on concentration only once showing significant improvement with just reference to its previous month, but not with the baselevel scores and most of the other times showing decline on concentration.

Thus, it could be seen that playing Volleyball significantly enhanced the level of concentration of female juvenile delinquents. This finding was almost in line with the findings of Gutin (1974), Zerras et al (1991), Roy and Manilal (1993) who also had reported significant positive impact on cognitive dimensions.

Sports particularly team sports like Volleyball, can be an outlet for all pent up emotions and a normalizer of one's emotional state. In modern civilization, human beings are never themselves; they meet most of their emergencies with headwork at any rate without the use of muscles. Thus, they are tied in mental knots. Participation in sports is perhaps the best way, to take care of these mental holdovers. If play activity is promoted among individuals especially adolescents that too deviant adolescents, they realize their potentialities and become effective toward a better and prosperous living.

Conclusion

Within the limitations of the present study, it was concluded that participation in Volleyball game had a significant positive impact in the enhancement on the level of concentration among institutionalized female juvenile delinquents.

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