

Martial Arts Training: A Novel "Cure" for Juvenile Delinquency

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Juvenile delinquents, identified by their scores on the Minnesota Multiphasic Personality Inventory (MMPI) received training under one of three different protocols for 1 hour three times weekly for a period of 6 months. Group I students received training in the traditional Korean Martial Art of Tae Kwon Do, Group II students received training in a "modern" version of the martial art which did not emphasize the psychological/philosophical aspects of the sport as the Korean version did, and group III students served as a control group for contact with the instructor and physical activity. Group I students showed decreased aggressiveness, lowered anxiety, increased self-esteem, increased social adroitness, and an increase in value orthodoxy, as indicated by before-and-after scores on the Jackson Personality Inventory (JPI), in addition to normal MMPI scores at the completion of the study. Group II students showed an even greater tendency toward delinquency on the MMPI than they did at the beginning of the study, a large increase in aggressiveness, and generally opposite effects of Group I on the JPI. Group III students showed no notable differences on any of the personality measures. These data suggest that training in the traditional martial art of Tae Kwon Do is effective in reducing juvenile delinquent tendencies.

INTRODUCTION

Adolescence is a notoriously turbulent emotional time during the development of the individual. This emotional upheaval is frequently

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manifested in a syndrome that has come to commonly be known as "juvenile delinquency" (Empry, 1982; Elliott & Ageton, 1980; Hirschi & Hindelang, 1977; Sullivan, Grant, & Grant, 1957). Examination of national crime statistics demonstrates that people under the age of 18 years are disproportionately involved in major crimes such as theft and violence. The delinquent behavior of juveniles involves all types of criminal activity and occurs among youth from all socio-economic and ethnic backgrounds. In such activities as drug abuse, it has been estimated that well over half of young Americans are involved (Siegel & Senna, 1981). While no single definition of juvenile delinquency is universally accepted, most psychologists consider it a period during development when the individual exhibits a lack of respect for the rights and property of others, the unwillingness to obey authority figures, and a strong desire to spend one's time according to his own dictates (Shoemaker, 1984; Arnold & Brungardt, 1983; Bodsky & O'Neal Smitherman, 1983; Waldo & Denitz, 1967; Zeleny, 1933). The phenomenon of juvenile delinquency has been more formally operationalized by a characteristic personality profile on the Minnesota Multiphasic Personality Inventory (MMPI). According to this definition, juvenile delinquents are individuals under the age of 18 years that display three unusually high scores on the psychopathic deviation, schizophrenia, and hypomania scales (Hathaway & Monachese, 1963; Rathus & Siegel, 1980). "Psychopathic deviation" refers to the disregard of the rules expected of the individual. The "schizophrenia" scale refers to lack of social grace and negative or "odd" behavior. Finally, "hypomania" refers to expansive behavior, that is, behavior not within the normal bounds of custom. In addition, the scores for delinquents are frequently lower on the scale for interest in the opposite sex, suggestive of a predominately masculine type of response on the part of the delinquents.

TREATMENT FOR JUVENILE DELINQUENTS

Although many different types of treatment have been tried for juvenile delinquents, none has proven to be effective (Gibbons, 1979, 1981; Miller, 1962; Bartlett & Moore, 1969; Black & Reiss, 1970; Carter, 1979; Collingwood, Williams, & Douds, 1976; Porterfield, 1943; Robinson & Smith 1971; Vinter, 1979; Wright & Dixon, 1977; Bodsky & O'Neal Smitherman, 1983). Since we notice that many of the behaviors exhibited by juvenile delinquents are significantly changed in the positive direction in adults following traditional martial arts training, we designed an experiment to examine whether such training would help resolve some of the problems experienced by juvenile delinquents. Although there had been several anecdotal accounts of martial arts training improving the behavior of youngsters, including juvenile delinquents (Cannold, 1982; Penrod, 1983), no systematic scientific investigation of this issue had been conducted.

EFFECTS OF MARTIAL ARTS TRAINING ON JUVENILE DELINQUENTS

The subjects were 34 high school students (all males) between the ages of 13–17 years and were referred by their parents to the head instructors of Tae Kwon Do (the Martial Art of Korea) clubs in several different states. These 34 subjects had met the criteria to be categorized as juvenile delinquents by their scores on the MMPI (Fig. 1). All subjects were administered tests for aggressiveness. Two separate tests were used to measure aggressiveness. One scale was modeled after Navaco (1975) and the other was derived from responses to six Rosenzweig Picture Frustration Test items (Numbers 3, 9, 10, 14, 16, and 24; Rosenzweig, Fleming, & Clarke, 1947), as previously described by Nosanchuk (1981). The subjects were also administered the Jackson Personality Inventory (JPI).² The subjects were then matched as closely as possible for age, score on the personality inventories, and socio-economic level, and then assigned to one of three groups: Group I (15 students) received traditional Tae Kwon Do training, Group II (11 students) received nontraditional, or so-called “modern” martial arts training, in which only fighting and self-defense techniques are taught, and Group III (nine students) received no martial arts training, but served as a control group for maturation, increased physical activity, and the influence of being with the instructor. Nine triads with virtually identical scores were matched among the three groups. The remaining seven students were assigned to Groups I and II based on overall scores that were less than one SD of the group mean. When students were administered the various psychological tests, they were told that the tests were being administered merely to help collect nationwide statistical data for an advertising agency, and, therefore, the students were unaware that the tests were related to the type of training they received.

All three groups were trained by the same (male) instructor. Personality inventories and parental interviews were conducted by a different individual who was unaware of which group each student was assigned. A third individual kept a code of the assignments until the completion of the study. Students were kept in the program under the pretense that they would be turned over to juvenile authorities if they did not complete the 6-month course of training. The students were not told the purpose of the study, only that they must spend 6 months with the instructor performing “constructive activities” in order to avoid being reported to the juvenile authorities. Students in each

²The Jackson Personality Inventory was developed by Dr. D. N. Jackson of the University of Western Ontario. It is a standard, commonly used personality inventory copyrighted by D. N. Jackson in 1976. The test contains 320 true-false test questions and provides accurate measurements of the 15 personality traits listed in Table I. In addition, it contains a scale for internal validity, known as the “infrequency scale.”

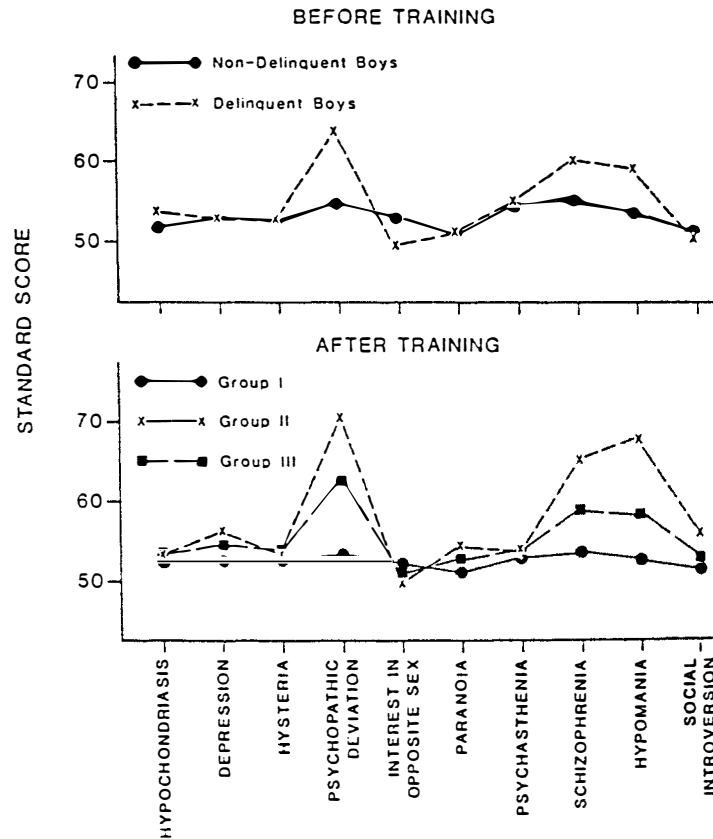


Fig. 1. Effects of training on juvenile delinquent boys. Upper panel: MMPI profile for nondelinquent boys (●—●) and delinquent boys (×—×). Note that delinquent boys show abnormal responses on psychopathic deviation, schizophrenia, and hypomania scales. Bottom panel: MMPI of initially juvenile delinquent boys after 6 months of training described in the text. Group I students received traditional Tae Kwon Do training (●—●), Group II students received training in a “modern” version of the martial art (×—×), and Group III students served as control subjects (■—■). Note that Group I students show a normal MMPI profile, while Group II students are even further from the control group after training than before training. Also note that Group III students showed little change in any of the categories.

of the three groups met separately (as groups) for 1 hour three times per week with the instructor for a period of 6 months. At the end of the 6-month period, all students were again given the MMPI, aggressiveness tests, and the JPI.

Students in Group I received traditional Tae Kwon Do training. During the typical training session, students begin with a period of meditation, designed to focus their attention on their practice sessions, as well as to reflect

upon their position, aspirations, and goals in life. This was followed by a sequence of calisthenics and stretching exercises, and then a brief lecture concerning Tae Kwon Do philosophy about life. This philosophy, which is an integral part of Tae Kwon Do training, emphasizes respect for others, building confidence and self-esteem, the importance of physical fitness, patience, perseverance, and honor. There is also a heavy emphasis on always maintaining a sense of responsibility. The brief lecture was followed by practice on basic Tae Kwon Do techniques (blocks, punches, kicks), forms,³ free-sparring, self-defense techniques, and ending with another period of meditation. Group II students practiced a "modern" version of the martial art in which only free-sparring and self-defense techniques, in addition to calisthenics and stretching exercises, were taught. Group III students participated in a number of other activities with the instructor, including basketball, jogging, and football. The purpose of Group III was to control for the benefits that may derive from maturation, contact with the instructor, and increased physical activity.

The results of the study were clear-cut. At the completion of the study, Group I students displayed normal MMPI scores (Fig. 1), aggressiveness scores that were below average (1.7 vs. 3.9 initially, $p < 0.01$, two-tailed t -test), and several positive personality traits on the JPI (Table I). These latter changes included lowered anxiety, increased self-esteem, increased social adroitness, and an increase in value orthodoxy. Group II students, on the other hand, showed an even greater tendency toward delinquency on the MMPI than they did at the beginning of the study (Fig. 1), a very large increase in aggressiveness (7.2 vs. 3.9 initially, $p < 0.01$, two-tailed t -test), and, for the most part, the opposite effects of Group I students on the JPI (Table I). Group III students showed no notable differences on any of the personality measures, although there was a tendency toward increased self-esteem and increased social adroitness. The aggressiveness score for Group III students was 3.1 vs. 3.9 initially, a nonsignificant difference.

DISCUSSION AND INTERPRETATION

The present data demonstrate that training in the traditional martial art of Tae Kwon Do is a very effective method for dealing with the problems of juvenile delinquents. It is not known whether training in other traditional Oriental martial arts would produce any changes in personality traits.

³"Forms" or "hyung" as they are called in Korean, are a sequence of various movements with blocking, striking, and kicking techniques against an imaginary opponent, designed to train the student to combine techniques effectively and move smoothly and swiftly from one technique to another. They emphasize balance, coordination, and strength, much like a gymnastics routine.

The present data are consistent with a previous study in which we examined the effects of Tae Kwon Do training on various personality traits in adults. That the observed effects are not attributable to contact with the instructor (an authority figure) is indicated by the fact that the students in Groups II and III did not show any significant positive personality changes. Many of the students in all three groups came from single parent homes and, therefore, an authority figure was frequently lacking in the home environment. Furthermore, the fact that the effects were not simply due to occupying the time of the students and/or the increased physical activity is again indicated by the fact that Group II and III students did not show any significant positive personality changes. Group III students showed some improvement on certain test scores, which may be attributable to the presence of an authority figure after whom to model their behavior. However, these students were dramatically different from Group I students, indicating that an authority figure alone is not sufficient to alter the students' behavior.

The fact that Group II students showed grossly abnormal scores on the MMPI, JPI and, in particular, on aggression tests, at the end of the study is of extreme concern for the following reasons. Martial arts are becoming

Table I. Effects of Training on Jackson Personality Inventory Scores in Male Juveniles^a

Trait	Juvenile delinquents				
	Before training		After training		
	Norm	Combined groups	Group I	Group II	Group III
Anxiety	10.76	16.77 ^b	5.54 ^c	17.04 ^b	14.34
Breadth of interest	8.69	7.62	9.05	7.44	8.02
Complexity	9.06	6.94	8.66	7.71	7.94
Conformity	9.32	7.82	10.65	5.98 ^b	8.65
Energy level	11.57	14.56	16.98	15.08	15.88
Innovation	12.09	11.98	12.54	10.43	12.18
Interpersonal affect	9.42	6.94	9.06	5.50 ^b	8.62
Organization	9.94	7.55	8.32	7.06	8.86
Responsibility	10.36	5.23 ^b	14.96 ^c	5.04 ^b	6.02 ^b
Risk taking	10.37	13.43	11.44	12.74	11.96
Self-esteem	10.72	6.58 ^b	14.76 ^c	7.14	8.16
Social adroitness	9.80	6.02 ^b	12.64 ^c	4.32 ^b	6.57 ^b
Social participation	10.02	11.20	11.98	9.35	10.85
Tolerance	11.45	6.96 ^b	12.14 ^c	4.67 ^b	7.89 ^b
Value orthodoxy	7.74	3.78 ^b	13.42 ^c	3.26 ^b	4.33 ^b

^aNormative data are provided by the Jackson Personality Inventory Instruction Manual and represent means based on 400 male high school students across North America. "Before training" represents the combined scores of all 34 students in the study. There were no significant differences among the three groups on any of the 15 personality variables at the beginning of the study. Group I students received traditional Tae Kwon Do training, Group II students received nontraditional training, and Group III students represent a control group.

^bSignificantly different from normative values.

^cSignificantly different from Group II values, two-tailed *t*-tests, $p < 0.05$.

very popular in America (and around the world) today, and numerous schools and clubs are appearing. Indeed, it has been estimated that over 10 million Americans are either currently active in martial arts practice or have taken such lesson in the past. In addition, it has also been estimated that more than 500,000 Americans are currently registering for lessons in the various martial arts each year. The majority of these clubs and schools teach only fighting and self-defense techniques, and our data reveal that this type of training enhances the negative personality traits of people who are already delinquent. Furthermore, preliminary data indicate that Group II-type training leads to negative personality traits in nondelinquent teenagers.

We feel that the reason for the positive personality changes in Group I students are many-fold. First, the traditional Tae Kwon Do instructor provides an authority figure for the students. Second, the instructor's behavior must be beyond reproach or his instructor's license may be revoked by the United States Tae Kwon Do Association; this provides a role model for the student. Third, the physical conditioning is intense and forces the student to utilize much of the excess energy that students in this age range possess. Fourth, and most importantly, as indicated by the control group, the practice sessions integrate into their training the psychological/philosophical conditioning that would be expected to lead to positive personality traits. Traditional Korean martial art philosophy places great emphasis on respect for others, humility, confidence, responsibility, honesty, perseverance, and honor. This philosophy is an integral part of traditional Tae Kwon Do training sessions. Furthermore, there is a very strong emphasis on using Tae Kwon Do techniques only for self-defense, to protect oneself, one's family, the weak, and one's country. In fact, students of traditional Tae Kwon Do are required to sign a pledge that they will use their skills only for the above-mentioned purposes. Students of the "modern" or nontraditional martial arts do not sign such a pledge. Nor do they take a membership oath, as in traditional Tae Kwon Do. Traditional Tae Kwon Do students take a membership oath which basically states that they as students of the martial art are united in mutual friendship, that they will train their spirits and bodies according to a strict code, and that they will comply with the rules and regulations (of the World Tae Kwon Do Federation) and obey their instructors. For those nontraditional martial arts schools that do require a "membership oath" of sorts, it takes the typical form of "might is right" philosophy. That is anything is acceptable as long as one is able to overpower his opponent.

Tae Kwon Do will be an Olympic event beginning in 1988. This, together with the fact that they simply come to enjoy the sport, has encouraged many of the students in our study to continue their training. In a follow-up study of four of the students in Group I, more than 1 year after completing the experiment, it was found that all four were nondelinquent. Three of these

students had continued their Tae Kwon Do training while one had quit after the 6-month test period. The four students in Group II and two students in Group III tested in the follow-up were still found to be delinquent. At the completion of the study, all students were told the purpose of the experiment and the results. Many Group II and III students began to practice traditional Tae Kwon Do during the weeks after the experiment had terminated.

CONCLUSIONS

The problem of juvenile delinquency has prevailed for centuries. In fact, juvenile delinquents were mentioned in many of the earliest written records (Sanders, 1970). Many editorials, statistics, and commission reports show that juvenile delinquency was of considerable concern to the citizens of America and Europe in the eighteenth and nineteenth centuries. Indeed, early Anglo-Saxon laws contained specific provisions for the punishment of youthful offenders (Sanders, 1970). Adults have always been concerned about the delinquent behavior of youngsters. This concern may be attributable to the idea that the nation's future lies in the development of its youth. There is considerable evidence that today's juvenile delinquent will be the criminal of the future (Arnold & Brunghardt, 1983; Bodsky & O'Neal Smitherman, 1983; Shoemaker, 1984). Therefore, it is critical that a solution to the problem of juvenile delinquency be found. Our study suggests that training in the traditional Korean martial art of Tae Kwon Do is extremely efficacious in dealing with the problems of juvenile delinquency. However, it is critical that the distinction between traditional and "modern" versions of the sport always be kept in mind, since the latter form produces strongly negative personality traits. Further studies using larger numbers of subjects from Tae Kwon Do Centers around the country and utilizing the criteria for antisocial personality disorder as specified in the DSM III as the definition of "juvenile delinquency" will be needed to confirm the hypothesis that traditional Tae Kwon Do training indeed serves as an effective "cure" for juvenile delinquency.

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BIOGRAPHICAL NOTE

MICHAEL E. TRULSON received his PhD Degree in Biopsychology from the University of Iowa in 1974. He was a Research Associate and Lecturer in Psychology at Princeton University from 1974-1980, where he taught several courses in psychology. He was an Assistant Professor of Psychology at the University of Texas at Dallas from 1980-1982, where again he taught many courses in psychology. In 1982, he moved to Marshall University School of Medicine where he was an Associate Professor of Medical Pharmacology for 2 years. In 1984, he accepted his present position as Associate Professor of Medical Anatomy at Texas A & M University College of Medicine. Dr. Trulson has practiced martial arts for more than 20 years. He practiced Judo, Japanese Karate, and Chinese Kung Fu prior to beginning his practice of Tae Kwon Do 12 years ago. He is currently a third degree black belt in Tae Kwon Do and is the Head Instructor and Faculty Advisor for the Texas A & M University Moo Duk Kwan Tae Kwon Do Club, which has more than 100 members.