



UNITED STATES JUDO FEDERATION

The Psychological and Behavioral Effects of Judo

A USJF White Paper

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To the American Judo Community and All Other Interested Parties;

The USJF Development Committee is pleased to provide you with this document entitled “**The Psychological and Behavioral Effects of Judo.**” We believe that this is a significant document because it is the first to review the available scientific studies published in scholarly research journals that examine the effects of judo practice. While we in the judo community have been content with merely making claims about the benefits of judo practice, those claims frankly have lacked a degree of substantiation because they were just that – claims. It is only now that the USJF Development Committee has decided to review the available scientific evidence on this topic to investigate the degree to which those claims may actually be true. And fortunately for those of us who have given our lives to this practice, the data seems to provide the first evidence validating these claims.

To complete this project we searched the evidence available that were published in scholarly, peer-reviewed journals published in English. This focus ensured that the studies we included in our review met the highest standards of academic and scholarly excellence. While there are numerous other reports published in trade magazines, newsletters, and private reports, we chose not to include them because there is no quality control over the work done to ensure the scientific validity of the findings reported. Thus we are fairly confident that while the number of studies we uncovered was small, their data meet acceptable scientific standards for reliability and validity.

At the same time this is a work in progress. There is always the possibility that there are studies that did not come to our attention. And there is the strong possibility that literature also exists in journals published in languages other than English. Thus we hope to continue to update this review periodically with new studies that come to our attention as time passes. We also issue this open invitation to any and all individuals to provide us with such references and citations to other studies not included here.

We believe this document should serve not only to validate much of our work in the trenches in our dojos every day; it should also serve as an important public relations vehicle. Please feel free to refer to this document in publications, press releases, and marketing literature you need for your dojos. The document may also be helpful to individuals who work in community centers, schools, and public and private institutions whose administrators may not be familiar with the benefits of judo. We ask only that if you do use this material that the proper credit be given to it and its source.

At this time the USJF Development Committee would like to thank Ms. Yasuko Sato, MA, for conducting the literature search, gathering the available evidence, and for writing the first draft of the review you are about to read. We also thank Mr. Noboru Saito, USJF President, for his vision of the importance of this endeavor, and the rest of the USJF Executive Committee for supporting it.

Sincerely,

David Matsumoto, Ph.D.
USJF Development Committee Co-Chair

The Psychological and Behavioral Effects of Judo

The principles of judo do not rely on the use of force, even though it is a martial art. Judo literally means “the gentle way,” and judo practice is supposed to train an individual to obtain self-discipline, restraint, coordination, mutual benefit, and companionship; it teaches one to deal with problems in a gentle way. Practicing judo therefore supposedly contributes not only to physical development but also to psychological maturity. Because of its philosophy, judo should be particularly effective to help individuals redirect aggression or frustration and become more socially adaptive.

The purpose of this document is to review scientific studies examining the effects of judo on these desirable outcomes. That is, this document goes beyond the rhetoric that is often associated with judo and other martial arts to examine directly whether or not there is any actual supportive scientific evidence that would support the claim that judo produces physical or psychological benefits to its participants.

Although the number of studies on this topic is limited, there have been some studies that have been conducted to evaluate the beneficial effects of judo, especially in relation to aggression. This paper will first discuss a study assessing the effect of judo practice on at risk children as an example in a real world setting. In the second section we will introduce a few studies examining the effects of judo practice on the physical and psychological development of handicapped children. In the third and final section we will discuss studies that have investigated the link between judo and aggression.

Judo and Delinquency

Fleisher, Avelar, Latorre, Ramirez, Cubillos, Christiansen, and Blaufarb (1995) evaluated the effect of a judo/community organization program that aimed to prevent delinquency in a low-income, high-crime area of Los Angeles. Crime in the neighborhood was pervasive, and it was important to redirect children's energy away from it. Children or adolescents in the community were not interested in county-funded delinquency treatment programs, but were highly interested in martial arts. The judo program therefore included delinquency treatment targeted for elementary school population.

The program provided one-year of judo instruction, judo and academic tutoring services, and family intervention (e.g., training sessions for parenting skills). Due to the purpose of the program, the judo training focused on acquiring self-discipline and self-control rather than physical skills. The principles of judo, such as responsibility and companionship for the community and dealing with problems without force, were emphasized.

A total of 90 children from third to sixth grade (61 boys and 29 girls) enrolled in the program. Of those, 95% were Latino immigrants from low-income, high-crime area. The judo classes were held twice a week for two hours over a one-year period. On alternative days, optional judo and academic tutoring services were provided. For family intervention, social workers organized training sessions for effective parenting techniques.

Both children and parents were assessed twice at one year apart. In both assessments, children completed the Wide Range Achievement Test (WRAT)

measuring reading, spelling, and arithmetic abilities. Children's behaviors at school were measured by their teachers and those at home were measured by parents using the Children Behavior Rating Scales (BRS). Finally, parents completed the Miller Social Learning Test for their knowledge of parenting skills. The results of the pre-post comparisons on the WRAT showed significant improvements in all academic abilities. Children's behaviors at school were also significantly improved after a year. Parents' skills were significantly increased on the knowledge of "parenting principles".

Teachers reported that "at the end of the year the children followed directions better, paid more attention, were more interested in school and acted up less," and that "many students wanted to participate in tutoring and judo sessions daily rather than twice a week" (p.245).

Judo and Physical and Psychological Development

Three studies explore and extend the results of the study described above. All of them have examined the effects of judo among children with mental retardation and/or visual impairment. One study involved a pre/post evaluation of judo training in personality, achievement, and physical fitness. The other two studies were preliminary studies intended for therapeutic application of judo training for handicapped children.

In the pre-post evaluation study (David & Byrd, 1975), 16 boys between the ages of 13 to 16 participated. Their IQ scores ranged from 55 to 80, which met the criteria for mental retardation. They were randomly selected and assigned to two groups; only one group had one-hour judo training sessions three times a week over a period of 12 weeks. All children completed standardized tests of personality, academic achievement, and physical fitness before and after the 12-week judo training. Changes on those tests

between children with and without judo training were compared. The results revealed that judo training had statistically significant effects on the total adjustment scores, one of the subscales for the personality test, and some fitness activities. Children's counselors and teachers also reported remarkable improvement in personal and social adjustment among some boys with judo training.

The following two studies were preliminary studies. While they did not employ any standardized tests to evaluate judo training, the lengths of training were longer and both studies reported more detailed descriptions of clinical observations.

One study (Gleser & Brown, 1986) was conducted with 25 visually handicapped children ranging from 8 to 18 years of age. Some of them were also affected by neurological disorders, such as rigidity and movement disorder, and psychiatric disorders such as retardation and adjustment disorder. They participated in judo training classes twice a week for 90 minutes over a nine-month period. Teachers were two certified judo instructors, one of whom had training in psychiatry. The training was modified for handicapped children, but classes were conducted concurrently with students who were not handicapped.

Results indicated that judo practice improved children both physically and psychologically. Constant physical activities improved symptoms related to movement disorder as well as cardiorespiratory function. Modeling judo movement also caused a reduction in movement disorders. Through direct physical contact with other students, handicapped children learned the potentials and limitations of not only their own bodies but also those of their peers. As a result, they obtained a better understanding of physical coordination.

Judo practice also reduced anxiety, improved coping skills, and increased self-esteem. The authors attributed the possible cause for these positive changes to the nature of judo practice. Judo is a gentle martial art; unlike karate or taekwondo, which employs strikes and blocks, judo employs throws and holds. The gentleness of judo allows players to be “going all the way’ in channeling inhibited aggression without harming the opponents” (p.749). The children with handicaps learned better coping skills through judo training, and their adjustment skills were reinforced by the social interaction with their teachers or peers. The authors noted, “With time, the students became less self-conscious while undressing or playing, and were more able to accept their handicaps” (p. 749). With knowledge of the physical coordination and social skills, children showed more adaptive maturation and increased their self-esteem.

These comments seem to be similar to the positive transitions obtained in the at-risk youth study above. Children in both samples became more adaptive, and these similarities may have occurred because they learned mature coping skill, such as how to channel their energy or frustration, through judo practice.

The second preliminary study (Gleser & Lison, 1986) reported similar findings. Ten emotionally disturbed male adolescents, ages 14 through 18, participated in a 90-minute judo practice twice a week for more than 4 months. All boys were residents of an educational and therapeutic group house. Over the course of the judo training, lectures in judo tradition, history, and contest rules were given. Group discussions and recreational activities (e.g., a matching card game to learn judo techniques or Japanese names) were introduced to the adolescents in their residential house.

The results were very similar to the study with visually handicapped children.

Judo training reduced maladaptive and reckless behaviors; anxiety and violence were channeled to more adaptive energy. For example, the adolescents became more interested in acquiring judo techniques or rules than simply overpowering people. Practicing with partners taught them companionship, and they started showing more respect to others. Those attitudes continued even in the residential house, outside of judo practice. Overall they became less aggressive, impulsive, and egocentric. They became more confident and self-assertive.

The results of the two preliminary studies illustrated a number of beneficial effects of judo practice. All three studies demonstrated children could better adjust, which is probably due to improved channeling their aggression.

Judo and Aggressiveness

Many studies (e.g., Nosanchuk, & MacNeil, 1989) have proven a decrease in aggression with duration of martial arts practice. These studies used karate or taekwondo students. One study (Lamarre & Nosanchuk, 1999) tested this notion with judo players. Fifty-one judo students (41 males and 10 females) ranging in age from 11 to 63 ($M = 30.5$, $SD = 13.0$) completed two questionnaires on aggressiveness. Both questionnaires measured the students' aggressive responses in imaginative hostile or frustrating situations. Belt level was used as an index of duration of judo training. Regression analysis revealed that belt level was negatively correlated with aggressiveness, even after controlling for age and sex, which are the variables that may affect the results. Thus, the aggression reduction hypothesis was supported with judo students.

But there is also some conflicting evidence. Reynes & Lorant (2001) assumed that people who are attracted to martial arts would be inherently more aggressive naturally, and a decrease in aggressiveness with training would occur because of their high initial aggression level. Based on this assumption, they conducted a study examining whether children who were attracted to martial arts had high aggressiveness compared with their peers. A total of 150 children consisting of 57 in judo, 27 in karate, and 66 without any martial arts training, participated in this study. All of them were 8 years old; all children practicing martial arts were beginners. They completed a questionnaire assessing physical and verbal aggression, anger, and hostility. The results showed that there were no differences in aggression and hostility, but children with judo training significantly scored higher than other children on anger.

Another study performed by Reynes and Lorant (2002) provided further conflicting evidence. They conducted a pre-post comparison over a one-year interval on an aggressiveness scale between children with and without judo training to examine a decline of aggressiveness with judo training. Twenty-seven boys without any martial arts training and 28 male judo students participated in this study. Both groups were the same age. Judo students started judo training at the age of 8 and continued for a year. Judo classes were held twice a week and each session lasted 90 minutes. Their dojos were traditional and emphasized a judo player's code of ethics such as self-control and companionship. All children completed the same aggressiveness scale as in their previous study (Reynes & Lorant, 2001) before and after one year judo training.

The results showed that children with judo training scored higher than their peers on anger in the first assessment. The results also indicated that the judo students

significantly scored higher on total aggression, verbal aggression, and anger scores in the second assessment, while no significant differences were observed among children without judo training, after controlling for their aggressiveness levels from the first assessment. Contrary to the results of the previous study (Lamarre & Nosanchuk, 1999), this study indicated that one year judo training made children more aggressive.

Given these contradictory findings it may be too early to draw any conclusions about the effects of judo on aggressiveness. It may be possible to assume that more aggressive children are attracted to martial arts, and one year of training at an early age may not decrease aggressiveness because it may be too abstract or complicated for them to understand the principles of judo. With age or longer period of training, however, self-control skills may develop. The study described earlier with at-risk youth certainly suggests that this may be the case.

Conclusion

Several studies were reviewed to evaluate the psychological and behavioral effects of judo practice. Unfortunately, there are only a few studies that have been published in scientific, peer reviewed journals on these topics to draw strong conclusions, but the available evidence is strongly suggestive of the positive effects of judo practice. The studies among handicapped children, for instance, demonstrated physical and psychological improvements through judo training. Judo practice and interactions with other judo players taught the children how to deal with problems without force and to transform their aggression. With new coping skills, the handicapped children became more adaptive. The studies on the relationships between aggressiveness and judo practice possibly suggest the importance of understanding the

principles of judo for a reduction in aggressiveness with judo training. Finally, the program evaluation study among high risk children highlighted the positive effects of judo in a real world, community based setting. Collectively these findings provide scientific evidence suggestive of the positive effects of judo.

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