

## THE IMPACT OF MARTIAL ARTS TRAINING FOR SCHOOL-AGED CHILDREN

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Seventy-six school children in the second (n=32) and third (n=44) grades were studied on measures of self-esteem, social skills, and teacher conduct ratings following seven months of martial arts training as part of their school curriculum from October to May. This training was provided to the children through a partnership between their elementary school in Pleasantville, N.J and the Future Leaders Foundation, affiliated with the Tang Soo Karate Academy. The children attended training classes two times a week during their school day. The children were administered a self-rating scale of self-esteem (Self Esteem Index) in the fall and spring of the school year. These ratings were compared using a repeated measures design. Peer ratings and teacher ratings were also collected for comparison.

## RESULTS

## Self-Esteem Measure.

The raw score ratings and Self Esteem Quotient from the Self Esteem Index (SEI) were used for pre and post training comparison. Thirty-two of these students (42%) produced an statistically significant increase in their SEQ (self Esteem Quotient) after six months of martial arts training. These are the students who showed an increase of more than 5 points on the SEQ, the standard error of measurement for the SEI at this age level. A repeated measures t-test analysis indicated a high level of confidence that the differences in the children's ratings were due to an effect rather than a chance occurrence. The average change in SEQ scores was 6 points. Interestingly, when the scores were sorted by grade, third graders, as a group, produced the most significant gains ( $p < .001$ ). However, more second graders (59%) met the criteria of an increase greater than 5 points.

The SEI has four subscales of self-ratings (Family Acceptance, Academic Competence, Peer Popularity, and Personal Security) and these were also studied with a repeated measures t-test design. The ratings of perceptions of Family Acceptance did not produce any significant changes during the course of the training. The students ratings of Academic Competence showed mild changes with borderline significance. The most statistically significant change among the subscales was for Personal Security ( $p = .0008$ ), followed by Peer Popularity ( $p = .0004$ ). Second graders showed significant changes on the total ratings and Personal Security. Third graders showed significant changes on total ratings, Personal Security, and Peer Popularity.

Based on these results, second and third grade children participating in martial arts training significantly improved their self-esteem (as measured by the SEI) after seven months in the program. The greatest improvement was found on SEI items associated with Personal Security and Peer Popularity.

## Peer Ratings.

Ratings by classmates were obtained using a sociometric measure similar to a sociogram. Children rated their classmates on the class roster to statement tapping social effectiveness. Unfortunately complete data were obtained for seventy of the seventy-six children and only one of the three proposed social questions were used. Thus the data are judged to be limited. Results from a t-test, indicated small but significant increases in ratings. However these ratings did not correlate very well with the Peer Popularity ratings from the SEI. The limited items on this measure shed doubt on the reliability of this measure and may have restricted any relationship to other ratings. Again, the stronger improvement in ratings was found for third graders.

#### Teacher Ratings.

The teacher ratings were not completed and thus not included in the study. It is possible that teachers found this measure too cumbersome or lengthy. Future attempts to include teacher ratings should consider this factor.

An attempt to substitute for these ratings was made by reviewing conduct ratings from the report card. Conduct grades from PE class were coded for first and last marking period. Academic Grades.

This area remains to be analyzed by coding report card grades for reading, math, and language arts from the first and last marking periods.

## CONCLUSION

The results of this study certainly suggest that many children who train in martial arts are likely to improve their perception of self-esteem and confidence. There are limitations to this study such as lack of control group (no training) and restricted behavioral measures that correlated with changes in self-esteem. However, as a pilot study these are impressive findings during a relatively short time interval. It will be most interesting to follow these children over a greater length of time and investigate the continued impact of their training. This study certainly suggests potential for making an impact on children and perhaps reduce their risk to factors which may restrict their feelings of self worth and success. Future study of these children should include: 1) more complete behavioral ratings from adults; 2) family ratings; 3) academic progress; and 4) more reliable sociometric ratings. Additional measures may become useful in measuring the long range impact of the children's success and with martial arts training.