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AGGRESSION AND PSYCHOLOGICAL WELL-BEING OF ADOLESCENT TAE KWON DO PARTICIPANTS IN COMPARISON WITH HOCKEY PARTICIPANTS AND A NON-SPORT GROUP

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ABSTRACT

Aggression among young adolescents has reached dangerous levels in contemporary society, especially in the school context where acts of aggression have increased dramatically. According to experts, schools in South Africa have become one of the most dangerous places where violence varies from blunt assaults on learners to bite wounds and fire-arm related injuries. It is a well accepted notion in Sport and Social Sciences that sport is an extension of society and the problems in society are also the problems in sport, therefore the aggression problem in society naturally extends into sport. It is therefore, imperative for educators and researchers to look at new ways to contain and reduce aggression in young adolescents, as well as finding creative ways to improve the psychological well-being of learners in our schools. The aim of this investigation is to determine if Tae Kwon Do, as a special form of Martial Art, can reduce aggression levels and improve psychological well-being significantly in comparison with hockey participants and a non sport group. A survey method and two standardized questionnaires were used in this study namely, an Aggression Questionnaire and a Psychological Well-being Questionnaire. The research indicated the following: the Verbal Aggression and Hostility scores of the Tae Kwon Do participants were significantly lower than the hockey participants and non sport group. The Personal Growth and Self-acceptance scores of Tae Kwon Do participants were significantly higher than the hockey participants and non sport group.

Key words: Aggression, psychological well-being, adolescence, TaeKwonDo, hockey and non-sport group.

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INTRODUCTION

The radical increase in recent media reports on aggression and violence in schools create the impression that the problem of aggression and violence in our schools is becoming uncontrollable. According to Baron, Byrne and Branscombe (2006), contemporary society is progressively confronted with serious problems of alcohol and sex abuse in combination with aggression and violence.

The Child Accident Prevention Foundation of Southern Africa describes schools as dangerous places where school violence varies from blunt assault on learners, to bite wounds and fire-arm related injuries. Therefore, these adolescents are more likely to be violated at school than at other places, making schools the most dangerous places for young learners (Kratcoski & Kratcoski, 1995). According to Anderson and Bushman (2002), the pandemic levels of violence can be attributed to lack of self-control and wisdom to handle their own violent impulses. When given a powerful tool of destruction, many children would use it to give expression to the aggressive impulses.

One of the main reasons identified as a major contributing factor to aggressive acts and a significant risk factor in youth violence in schools, may be the continuous exposure to media violence (Baron et al., 2006).

Sport psychologists and sociologists accept the notion that sport mirrors society as a whole and that sport is a natural extension of society. The problems in society are also the problems in sport and therefore, aggression and violence in society naturally extends into the sport environment. Sport participants are put under such great pressure (not only from the coach, but also from their parents) that they are willing to sacrifice their bodies and take risks in the pursuit of affirmation and approval. The coach has a very powerful influence on the sport participant (Cox, 2002). When coaches encourage recklessness (either naively or intentionally), they promote dangerous forms of deviance. Coaches should be primary role models for sport participants and act as mentors and specialists in their field to help participants create their own boundaries and limits. The experience of Jeremy Shockey, a well established NFL player, strikes the core of the problem in the following words: *"I feel like I've been coached that way my whole life – to play dirty and to play mean"* (Lieber, 2003, p. 1C).

Over the past couple of decades, Martial Arts have gained increasing popularity. According to Greenberg (2000), Martial Arts organizations reported increases ranging from 15% a year to 400% in three years. According to Grady (2000), Martial Arts have gained increasing popularity in movies and as sporting events. Portrayals of Martial Arts in movies range from sociopath (Martial Arts villains who kill and maim without reluctance) to the violently heroic (Bruce Lee and Jackie Chan). This study attempts to start answering the question of the effects that Martial Arts participation has on adolescent development (Sim, 2002). Therefore, we can safely say that the media gives the public the impression that Martial Arts are in fact "causing" aggressiveness in children nowadays. Young children are particularly vulnerable, as they are open to new experiences.

It is entirely natural for a child learning karate to try to copy the behaviour of Ninja Turtles or some Eastern leader who happens to practise Martial Arts.

If the true nature of Martial Arts and specifically Tae Kwon Do is studied, the surprising opposite of the media's perception of Martial Arts is uncovered. The relevant question that has to be asked becomes: "What effect does learning to fight have on aggression?" The answer to this question is far from simple. The effects that training in the Martial Arts has on the way the trained person views the actions received, with regard to both the judgement of aggression and the likelihood of revenge for a perceived attack, is being examined. The judgement of a third-party observer may also be affected by training in the fighting arts. Martial Arts, especially Russian Martial Arts, remind us that we are capable of a spontaneous, innovative, original response to every conflict situation and that the learning environment is based on simplicity, fairness and pure enjoyment (Delva-Tauilili, 1995).

Daniels and Thornton (1992) found that participants in the Martial Arts displayed a larger decrease in hostility over time than participants in tennis or rugby. These authors mention that various factors, such as the degree of respect the participants showed to the sensei, the dojo and one another, the level of contact allowed to vital areas of the body and the relative importance of the kata, were demonstrated by athletes who participated in only one semester of Tae Kwon Do. These factors were not observed in sport participants participating in other sport activities such as rugby or hockey. Tae Kwon Do was selected from the various Martial Arts styles, because Tae Kwon Do is a type of Martial Art that has a very broad combination of traditional components of any Martial Arts programme. It also consists of elements that will have a desired outcome on participants.

In the last decade there has been a radical shift and special emphasis in research on learners in terms of psychological well-being (Edwards, 2007). With all the negative media reports not only on violence, but also on drug abuse and other dysfunctional learner behaviour, the notion is accepted that the psychological

well-being of the adolescent in the South African school setting is also under great pressure. According to Edwards (2007), psychological well-being refers to positive mental health. Psychological well-being develops through a combination of emotional regulations, personality characteristics, identity and life experiences (Helson & Srivastava, 2001). An objective understanding of psychological well-being was extensively researched by Ryff. With the following components, Autonomy, Personal Growth, Environmental Mastery, Purpose in life, Positive relations with others and Self-acceptance, Ryff's research has resulted in a new objective psychological well-being measuring instrument (Ryff, 1989; Conway & Macleod, 2002; Keyes, Shmotkin & Ryff, 2002).

AIM OF THE STUDY

The overall aim of the study is to determine if Tae Kwon Do can indeed serve as a coping strategy for aggressive behaviour in young adolescents. The general aim is to reveal the unique relationship between Tae Kwon Do, aggression and psychological well-being in comparisons among the hockey participants and a non sport group. The specific objective of this study is to determine the difference in aggression levels and psychological well-being of young adolescents participating in Tae Kwon Do, hockey participants and non sport group. Based on the work of Daniels and Thornton (1992), the hypothesis for this study is that participants in Tae Kwon Do will demonstrate more efficient control of aggression and higher levels of psychological well-being as opposed to participants in hockey and those absent from any sporting activity. It is expected that a Martial Arts programme (Tae Kwon Do) would serve as a coping strategy to improve psychological well-being and control of aggression.

METHOD AND PROCEDURE

A research design is the basic plan that guides the data collection and analysis phases of a research project. "*It is the framework that specifies the type of information to be collected, the sources of data, and the data collection procedure"* (Kinnear & Taylor, 1996, p. 129). To generate data within this study, a quantitative research methodology was

used. A survey method with two standardized questionnaires was employed the Aggression Questionnaire (Buss & Perry, 1992) and the Psychological Well-being Questionnaire (Ryff, 1989).

Non-parametric statistics test hypotheses about differences in populations on the basis of the measurements made on small samples of subjects (Tabachnick & Fidell, 1996). The Kruskal-Wallis one-way analysis of variance is a direct generalisation of the Wilcoxon test to the case in which we have three or more independent groups. As such, it is the distribution-free analogue of the one-way analysis of variance.

This test was used in the study to determine whether there were statistically significant differences between the aggression and psychological well-being of participants who played hockey and those who took part in Tae Kwon Do and a control group of non sporting participants. Participants in Tae Kwon Do, hockey and the control group were compared to one another in terms of their self-perceived aggressiveness and psychological well-being.

The sample consisted of 24 Tae Kwon Do participants, 24 hockey participants and 24 non sport participants. The Tae Kwon Do group consists of 24 young male and female adolescents from suitable Martial Arts Combat Tae Kwon Do clubs situated in the Pretoria suburbs of Annlin, Silver Lakes and Villieria respectively. The coach (sensei) at these clubs is also registered with the MATA (Martial Arts Teachers Association). An average suburb High School in Pretoria was selected to canvas for volunteers (hockey participants and a non sport group). As a result of the difficult circumstances of a High School setting and selection allocation, the researcher did not have the luxury to employ the scientific stringent method of random sampling, but was forced to use a sample of convenience that only consisted of volunteers. The researchers are well aware of the fact that the use of convenient sampling may limit the generalization of the findings of this study. The inclusion criteria for all participants are that the participant must be between 15 and 18 years old.

Only adolescents (male and female) that obtained their parents' consent for this study were included. The exclusion criteria were those adolescents that were under the age of 15 and over the age of 18 years. The information obtained from the sample was captured onto a computer and the data was analysed by means of the Statistical Product and Service Solutions Package.

Measuring instruments: Buss and Perry's Aggression Questionnaire

The aggression questionnaire is a full revision of the Buss-Durkee Hostility Inventory, a widely-used measure assessing hostility and aggression. It has shown adequate psychometric standards in English-speaking samples. Scoring: The aggression scale consists of four factors: Physical Aggression (PA), Verbal Aggression (VA), Anger (A), and Hostility (H). The total score for aggression is the sum of the factor scores. Validity: Criterion validity was assessed and found to be acceptable. The internal consistency (coefficient alpha) ranged between **0.55** and **0.94** (Buss & Perry, 1992).

Psychological Well-being Questionnaire

Scales of psychological well-being were constructed to measure the six dimensions of psychological well-being namely, Autonomy, Environmental Mastery, Personal Growth, Positive relations with others, Purpose in life, and Self-acceptance. Initially this scale was constructed as a 20-item questionnaire and has been standardized in 3,9 and 14-item forms. This questionnaire measures cognitive distortions (aggressive behaviour) in antisocial youth. This questionnaire is currently in use in various large-scale national and international surveys (Edwards, 2007). Research has shown high levels of internal consistency and alpha coefficients on the six subscales as follows: Autonomy .**83**, Personal Growth .**85**, Environmental Mastery .**86**, Purpose in life .**88**, Positive relations with others .**88**, and Self-acceptance .**91** (Ryff, 1989; Ryff & Keyes, 1995).

RESULTS

The following section describes the results of the analysis of the differences in

scores on the subscales of the aggression and psychological well-being questionnaires. All statistically significant differences are bolded in the Tables.

The results of non-parametric tests were used to determine whether statistically significant differences exist between the three groups (Tae Kwon Do, hockey participants and non sport control group) on the Aggression scales.

Figure 1 represents the mean scores of the three groups (Tae Kwon Do, hockey participants and non sport group) on the Aggression subscales. The results of the analysis are presented in Tables 1 and 2. Two statistically significant differences were detected at the 5% level of significance. The Verbal Aggression and Hostility scores of the group which participated in Tae Kwon Do were significantly lower than those of the other two groups.

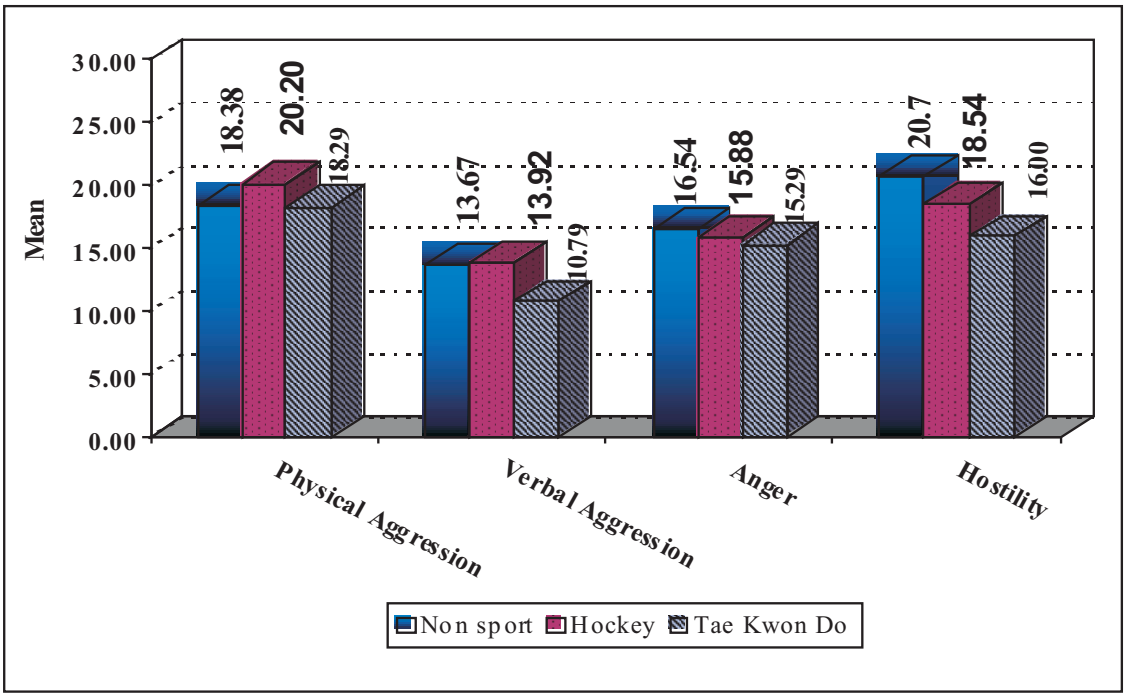

Figure 1: Aggression subscales for the Tae Kwon Do, hockey and non sport group

Table 1: Kruskal-Wallis test ranks

	Group	N	Mean Rank
Physical Aggression	No Sport	24	33.21
	Hockey	24	41.56
	Martial Arts	24	34.73
	Total	72	
Verbal Aggression	No Sport	24	**43.48**
	Hockey	24	**44.48**
	Martial Arts	24	**21.54**
	Total	72	
Anger	No Sport	24	40.54
	Hockey	24	36.52
	Martial Arts	24	32.44
	Total	72	
Hostility	No Sport	24	**48.77**
	Hockey	24	**35.83**
	Martial Arts	24	**24.90**
	Total	72	

Table 2: Test statistics (a, b)

	Physical Aggression	Verbal Aggression	Anger	Hostility
Chi-square	2.184	18.771	1.823	15.774
df	2	2	2	2
Asymp. Sig.	.336	**.000**	.402	**.000**

[a]Kruskal-Wallis Test; [b]Grouping Variable: Group

The results of non-parametric tests were used to determine whether statistically significant differences exist between the three groups (Tae Kwon Do, hockey participants and non sport group) on the Psychological Well-being scales.

The results of the comparison of the three groups on the psychological well-being tests are presented in Figure 2 with the mean scores of each group per subscale. The results of the statistical analyses are presented in Tables 3 and 4. Two statistically significant differences were detected between the three groups at the 5% level of significance. The Personal Growth scores of the Tae Kwon Do group were significantly higher than those of the other two groups; and the group which did not participate in any sport had the lowest score.

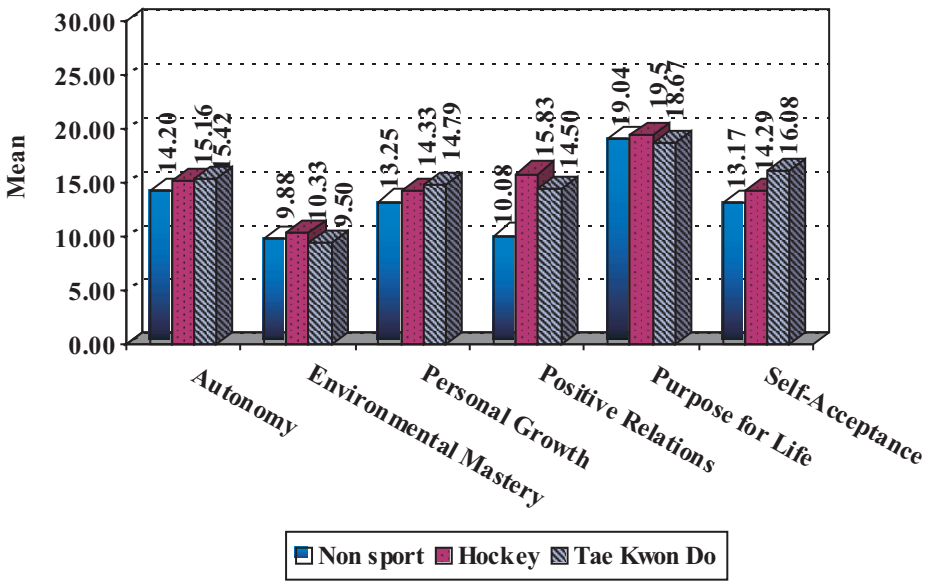

Figure 2: Psychological Well-being scales for the Tae Kwon Do, hockey and non sport group.

Table 3: Kruskal-Wallis test ranks

	Group	N	Mean Rank
Autonomy	No Sport	24	34.63
	Hockey	24	37.52
	Martial Arts	24	37.35
	Total	72	
Environmental Mastery	No Sport	24	37.10
	Hockey	24	41.15
	Martial Arts	24	31.25
	Total	72	
Personal Growth	No Sport	24	27.48
	Hockey	24	38.27
	Martial Arts	24	43.75
	Total	72	
Positive Relations	No Sport	24	32.04
	Hockey	24	43.83
	Martial Arts	24	33.63
	Total	72	
Purpose in Life	No Sport	24	38.81
	Hockey	24	39.08
	Martial Arts	24	31.60
	Total	72	
Self-Acceptance	No Sport	24	24.88
	Hockey	24	35.04
	Martial Arts	24	49.58
	Total	72	

Table 4: Test statistics (a, b)

	Autonomy	Environmental Mastery	Personal Growth	Positive Relations	Purpose in Life	Self - Acceptance
Chi-square	.298	2.796	7.759	4.560	2.016	17.184
df	2	2	2	2	2	2
Asymp. Sig.	.862	.247	**.021**	.102	.365	**.000**

[a]Kruskal-Wallis Test; [b]Grouping Variable: Group.

The Self-acceptance scores of the Tae Kwon Do group were also significantly higher than those of the other two groups; the group which did not participate in any sport once again had the lowest score.

DISCUSSION

The hypothesis for this study cannot fully be accepted, but can also not fully be discarded. A partial acceptance of the hypothesis is possible if the subscales of the two standardized questionnaires are taken into account. The Verbal Aggression and Hostility subscales of the Tae Kwon Do group were significantly lower than the hockey participants and non sport group. This finding is in line with the work of Daniels and Thornton (1992) that also confirmed that athletes who participated in Tae Kwon Do displayed a significant decrease in aggressive behaviour over time than participants in tennis or rugby. The results of the psychological well-being subscales indicated that the Personal Growth and Self-acceptance scores of the Tae Kwon-Do group were significantly higher than those of the other two groups. In both cases the group that did not participate in any sport had the lowest scores. This finding is in line with the work of Egan (1993) that determine that the training of Martial Arts and weight training led to improvements in general psychological well-being. Authors such as Miller (1989) and Finkenburg (1990) analysed the effects of Tae Kwon Do training on personality and found that, in addition to the physical training, Tae Kwon Do emphasises concentration, self-control and self-discipline. They suggest that Tae Kwon Do training has many psychological benefits (including enhanced self-esteem, self-concept, reduced aggressiveness,

decreased anxiety and greater personal independence and ability to play a leadership role). They also state that the participant's self-concept may be enhanced by the acquisition or mastery of a new skill. This finding suggests that all the psychological benefits that are derived from Martial Arts and specifically Tae Kwon Do may be intimately related to the components of psychological well-being as explained by Edwards (2007).

The reason why there were non-significant statistical differences in the subscales of Physical Aggression and Anger (Aggression Questionnaire), as well as Autonomy, Environmental Mastery, Positive relations and Purpose of life (Psychological Well-being Questionnaire), in favour of the Tae Kwon Do participants in relation to the other control groups, cannot be fully explained. A possible reason for not finding significant differences on all the subscales may be the fact that stringent scientific principles of random sampling and sufficient sample size were not fully applied. Using a convenient sample, and the fact that relative small sample sizes were used, may have contributed to the lack of finding more significant differences on all the subscales involved.

CONCLUSION

In conclusion and based on the findings of this study, it can be stated that Tae Kwon Do that is practised in a traditional setting with proper values and rituals that promote respect for yourself and others, may have a positive effect on adolescents, ability to control aggression and promote elements of psychological well-being. In the Martial Arts literature that was studied, there is a strong notion that Martial Arts can enable participants to channel aggressiveness constructively. The findings and the available literature on psychological well-being also strongly suggest that Martial Arts that are practised in a traditional way can promote psychological well-being.

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