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Evaluation of Executive Functions Skills among Youth Taekwondo Players and Non-Taekwondo Players with the Executive Skills Questionnaire-Revised

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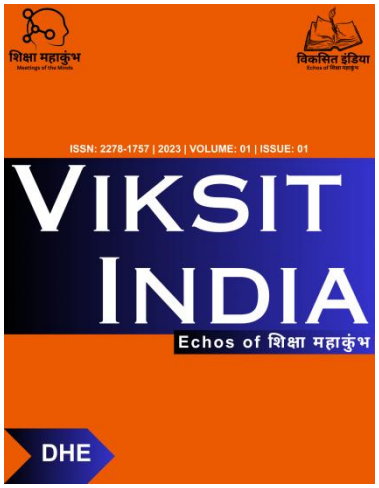

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Abstract
The purpose of the study is to identify the difference in executive skills like Behavioral Regulation, Organization, Emotional Regulation, Time Management, and Plan Management between Taekwondo players and Non-taekwondo players with The Executive Skills Questionnaire-Revised. The present study was conducted on a sample of thirty-two (N=32) Youth, which includes sixteen (16) Taekwondo players female University Youth and sixteen (16) Non-Taekwondo players female University Youth age of in-between Fifteen to Twenty-Four (15 to 24) years old students of Cotton University in Guwahati, India. Data was collected by using The Executive Skills Questionnaire-Revised developed by Strait, J. E., Dawson, P., Walther, C. A., Strait, G. G., Barton, A. K., & McClain, M. B. (2020) which includes the 25 items. An Independent t-test was applied to assess the differences between Taekwondo players and Non-Taekwondo players female University Youth. For testing the hypotheses, the level of significance was set at 0.05. The result revealed no significant difference concerning executive function skills among Taekwondo players and Non-Taekwondo players female Youth of Cotton University in Guwahati, India.

Keywords: Executive function skills, female, Taekwondo

Introduction
Taekwondo, a Korean-origin self-defense basically focused on kicks. It absolutely was developed by Korean martial artists during the 1940s and 1950s. It was advanced as a mix of Okinawan karate, Chinese martial arts, and also the indigenous traditions of takedown and gwonbeop. the 2 main international organizational bodies for Taekwondo today are the International Tae Kwon-Do Federation (ITF) which was founded by General Choi Hong Hi in 1966, and therefore the World Tae Kwon Do Federation (WTF), founded in 1973 by the KTA Kang, (Won Sik; Lee, Kyong Myung 1999) This self-defense was categorized by its emphasis on head-height kicks, fast kicking techniques and jumping & spinning kicks. In fact, World Taekwondo Federation awards additional points for strikes that incorporate jumping and spinning kicks in sparring competitions. Taekwondo generally adopts stances that are narrower and hence less stable than the broader ones to facilitate fast-turning kicks whereas wide stances are utilized by martial arts like karate.

The executive function may be a set of mental skills that include remembering, flexible thinking, and self-control. A person uses these skills each day to find out, work, and manage the standard of living. It helps a person to manage schedules, and to figure out things during a proper arrange to achieve his goal on time. The management skill under EF skills helps an individual to prioritize and organize their work. An executive function might be a collection of mental skills that include remembering, flexible thinking, and self-control. a private use these skills each day to search out, work, and manage a way of life. It helps a private to manage schedules and to work out things during a correct plan to achieve his goal on time. The management skill under EF skills helps someone to prioritize and organize their work. Adolescence can be a phase of life considered by massive hormonal and physical deviations (Coleman & Hendry, 1990; Feldman & Elliott, 1990) (Blakemore, S. J., & Choudhury, S. 2006). This development from childhood to adulthood includes changes in identity, self-consciousness, and cognitive flexibility (Rutter & Rutter, 1993). Youth are ready to think more strategically because their capacity to hold in mind is more multi-dimensional.

Plan Management: - Plan management is the ability to prepare a vision for the future and strategize solutions is essential to good management.
Time Management: - Time Management could be a skill that leads someone in such the simplest way that procrastination will never have an area in their life. They always give priority to time.

Emotional Regulation: - Emotion regulation is the ability to exert control over one's spirit. It's going to involve behaviors like rethinking a challenging situation to scale back anger or anxiety, hiding visible signs of sadness or fear, or that specialize in reasons to feel happy or calm.

Organization: - Organization could be a skill that is incredibly essential in an exceeding task completion this skill helps to execute the task in a smooth way keeping all the data and required materials easily reachable

Behavior Regulation: - Behavioral regulation refers to your ability to resist using unhealthy behaviors to control emotion

Objectives of the Study

The objectives of the study are to identify the deference of Executive Function skills like Behavioral Regulation, Organization, Emotional Regulation, Time Management, and Plan Management between Taekwondo players and Non-taekwondo players female University Youth of Cotton University.

Hypothesis

From personal experience, Expert opinion, public view, and after a review of the literature, it was hypothesized that there might be no significant difference in Executive Function skills like Behavioral Regulation, Organization, Emotional Regulation, Time Management, and Plan Management between Taekwondo players and Non-taekwondo female players of University Youth of Cotton University.

Method

This study was conducted on a sample of Thirty-Two (N=32) adolescents, which includes sixteen (16) Taekwondo players and sixteen (16) Non-Taekwondo players Youth female University Students, the age range between (15 to 24) years old students of Cotton University in Guwahati, India. Fig. 1.

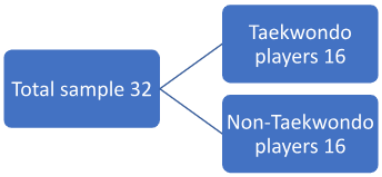

Fig. 1 Sample Composition: Taekwondo Players

Tool

For evaluating the executive functions skill level of the topics, the executive Skills Questionnaire-Revised developed by Strait, J. E., Dawson, P., Walther, C. A., Strait, G. G., Barton, A. K., & McClain, M. B. (2020). The 25 items on this survey yield scores in 5 domains with executive skills which we call Skill Areas**.** Each item possesses a 0 – Never, 1 – Sometimes, 2 – Often,3 – very often, rating scale used. The five skill areas are Plan Management, Time Management, Organization, Emotional Regulation, and Behavioral Regulation. ESQ-R to style interventions supported a student's specific profile of stronger and weaker skills.

Procedure

The questionnaires administrated the short 25-item online survey on the subjects from the University students which includes female Taekwondo players and non-Taekwondo players of University Youth at Cotton University in Guwahati, India. Before the administration of the questionnaire, the researcher approached the subjects online on Microsoft Teams, over a phone conversation and asked them to increase their persistent cooperation within the data collection. The 25 items on this survey yield scores in 5 domains of executive skills, which we call Skill Areas. Scores reported are the average score for each Skill Area, and they range from 0 to 3. The lower the score stronger the abilities are in this domain. When a score falls at 2 or above, this implies they need to be rated the things on this scale as either often or very often true, so any skill area with a score of two or more will be problematic for them.

Data Analysis

Mean, S.D., and t-test was computed by using Statistical Package for the Social Science (SPSS) to examine the significant discrepancy between two experimental groups on the parameter of Executive Function Skills Questionnaire-Revised considered for the study.

Results

Table 1: Comparison of means on average total score of executive Function skills between Taekwondo players and non-Taekwondo players female University Youth of Cotton University in Guwahati, India.

	No. of Subjects	Mean	S.D. (Standard Deviation	Mean Difference	Std. Error Difference	Calculated t-value
Taekwondo Female players	16	0.1698	0.06993	-0.04487	0.027	1.62
Non-Taekwondo Female players	16	0.2147	0.08534			

@Significant at 0.05level

Tabulated t0.05 (30) =2.042

It is evident from the above table that a significant difference does not exist in the total average score between Taekwondo players and non-Taekwondo players female University Youth of Cotton University on executive function skills as the obtained calculated't' value has been reported as 1.62 which is considerably lower than the tabled value of't'-value (2.042) at 0.05 level of significance with 30 degrees of freedom.

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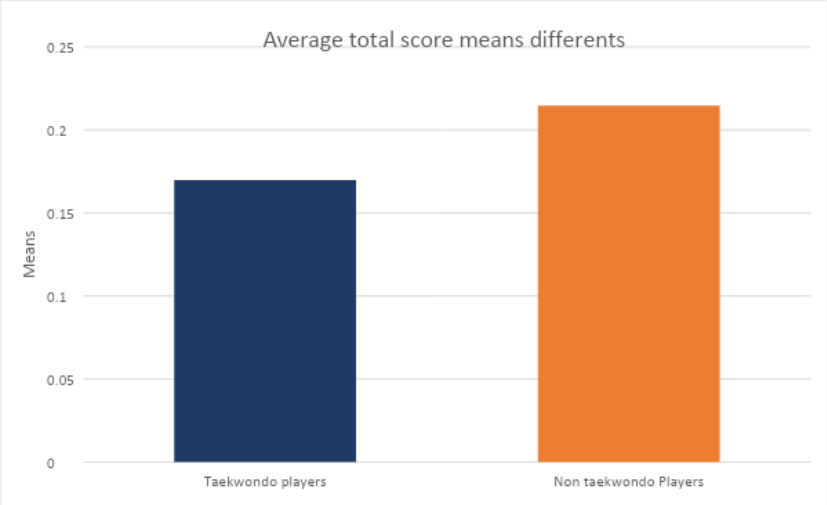

Fig. 2 Comparison of means on average total score of executive Function skills between Taekwondo players and non-Taekwondo players female University Youth of Cotton University.

ESQ-R results for a personal student Reported below are the common Total Score and also the average Skill Area lots of the scholars that the survey was done. Low scores represent comparative strengths, and high scores represent comparative weaknesses. If the typical score is 2 or greater, this indicates that on average students rated items in this Skill Area as either often or very often true, which suggests this may well be a region to focus on for intervention. In an appendix to the current report, we include a table listing the student's responses to the individual scores on all 25 items of the ESQ-R anytime the survey was completed.

Fig. 3 ESQ-R

Comparison between the different studied groups according to different executive functions Domain

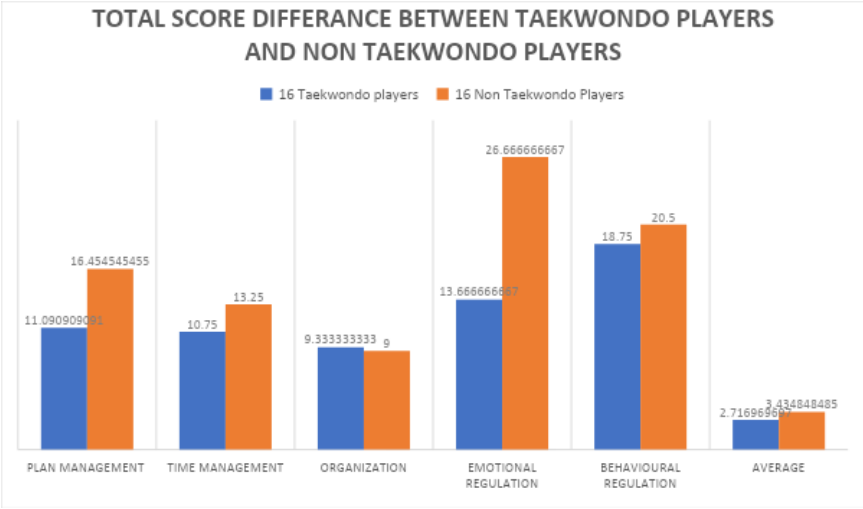

Fig. 4 Difference between Taekwondo players and non-Taekwondo players female University Youth of Cotton University on a total score of 5 skills.

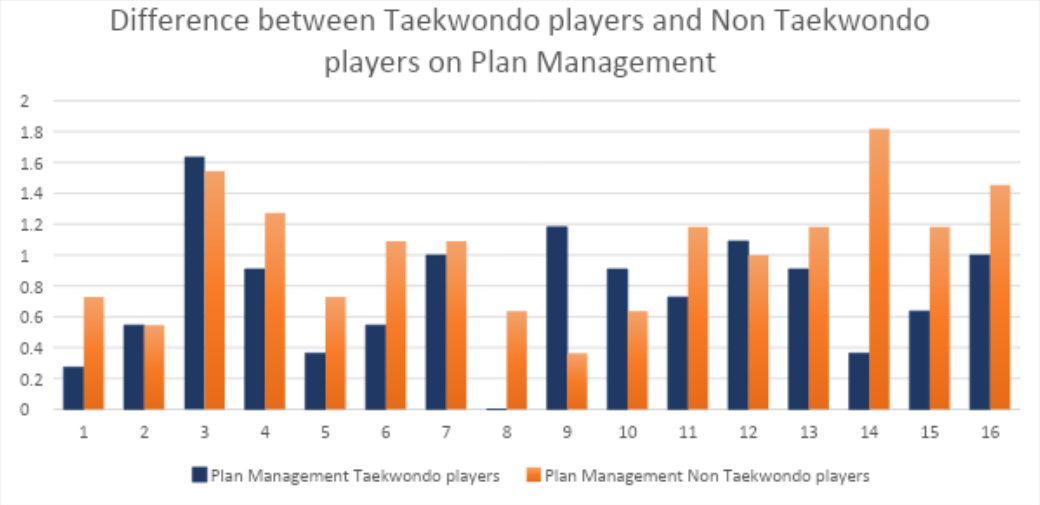

Fig. 5 Difference between Taekwondo players and non-Taekwondo players female University Youth Adolescents of Cotton University on Plan Management skill.

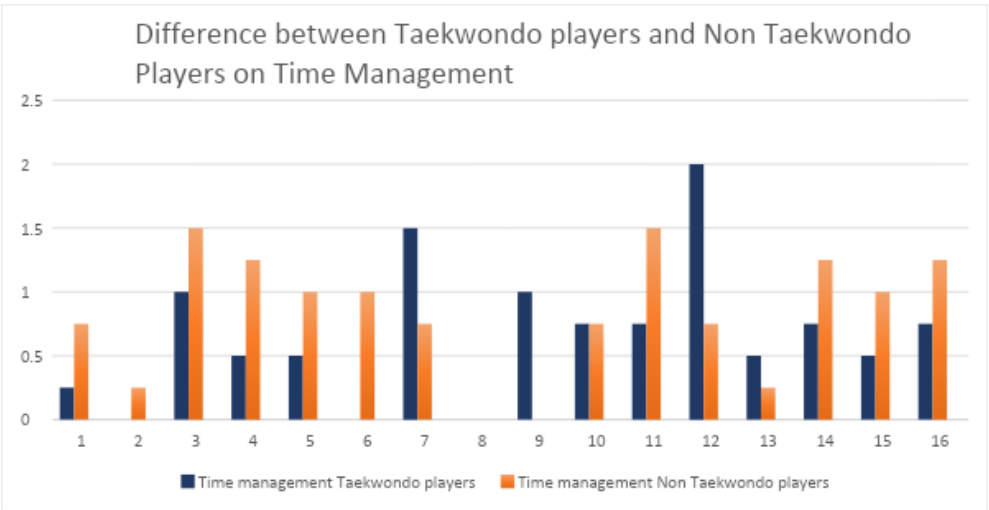

Fig. 6 Difference between Taekwondo players and non-Taekwondo players female University Youth of Cotton University on Time Management skill

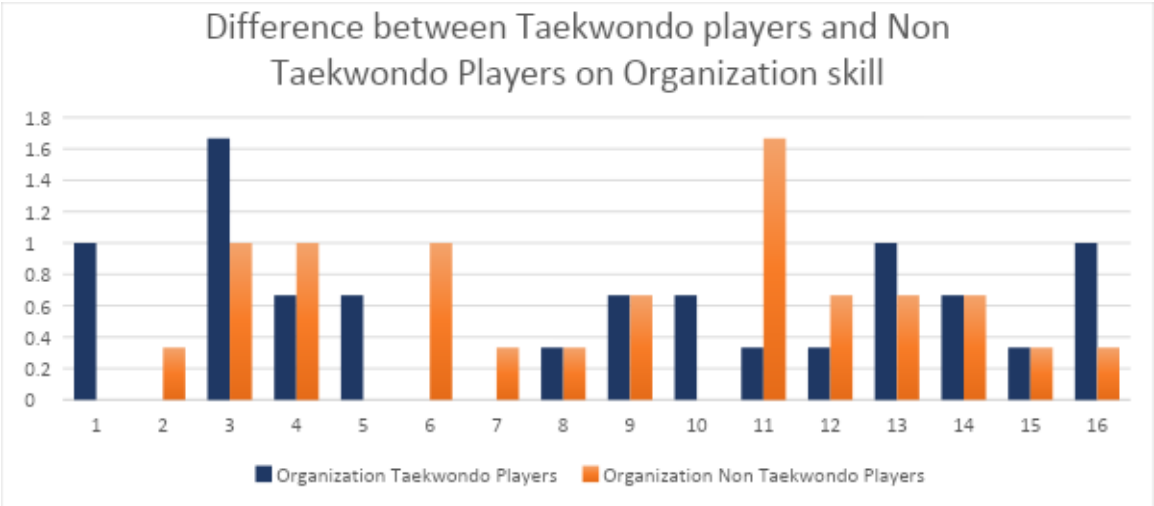

Fig. 7 Difference between Taekwondo players and non-Taekwondo players female University Youth of Cotton University on Organization skill.

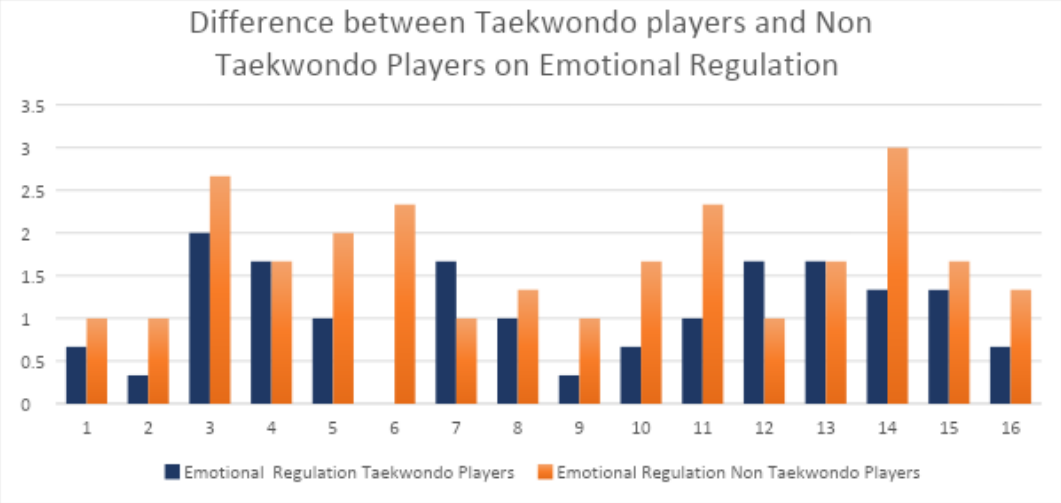

Fig. 8 Difference between Taekwondo players and non-Taekwondo players female University Youth of Cotton University on Emotional Regulation skill.

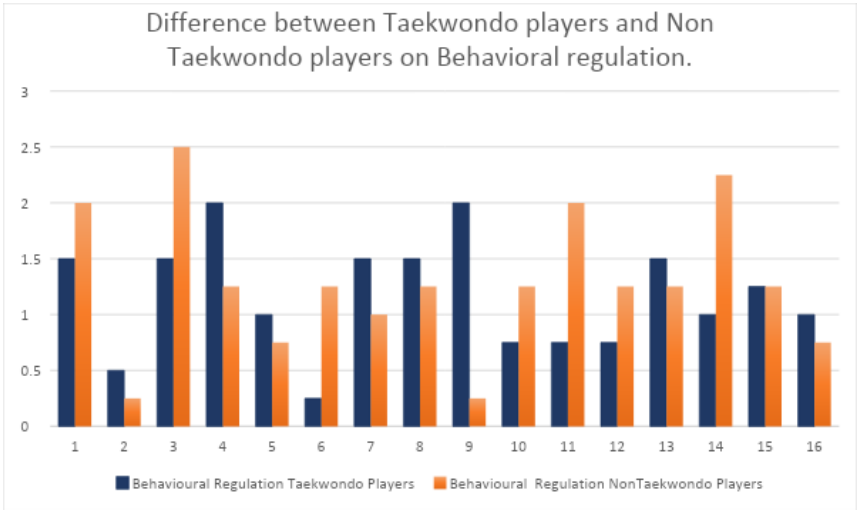

Fig. 9 Difference between Taekwondo players and non-Taekwondo players female University Youth of Cotton University on Behavioral Regulation skill.

Discussion

The findings of statistical analysis revealed that, statistically there was no significant difference in overall executive function skills of Taekwondo players and non-Taekwondo players female University Youth of Cotton University in Guwahati, India. From the means it was shown that non-Taekwondo player's youth had higher Executive skills score more than Taekwondo player youth. The higher scores may help to decide on which areas they have to improve whereas the low scores represent their comparative strengths. It may be able to figure out ways to take advantage of their strengths or even make them stronger. If we see the total score of the skills, Plan Management, Organization, and Time Management have low scores in both the groups which means these skills are the strength of the Adolescents of Cotton University. It shows that having an organized workspace makes it easier for them to get down working and using their time efficiently. On the other hand, we found that Behavioral Regulation and Emotional Regulation having high scores is a weakness.

Discussion of Hypothesis

At the beginning of the study, it was hypothesized that there might be no significant difference in Executive Function skills like Behavioral Regulation, Organization, Emotional Regulation, Time Management, and Plan Management between Taekwondo players and Non-taekwondo players female University Youth of Cotton University. The statistical result of this study revealed that there were no significant differences in Executive Function skills between Taekwondo players and Non-taekwondo players from female University Youth of Cotton University. Hence the null hypothesis stated earlier is accepted.

Conclusion

Considering the limitations of the study and based on statistical findings it was concluded that there was no significant difference in Executive Function skills like Behavioral Regulation, Organization, Emotional Regulation, Time Management, or Plan Management between the Taekwondo players and non-Taekwondo players female University Youth of Cotton University in Guwahati, India.

Recommendation

Based on the conclusion, the following recommendations are made

- It is recommended that a similar study may be repeated on a large sample to make the study more valid and authentic.
- It is recommended that a similar study may be undertaken by selecting subjects of different ages, sex, and different groups of people from another field.
- Games and sports are recommended to develop a personality.
- We may be able to compare other psychological variables among selected groups of subjects

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