Practice And Play Determine The Success Of Mrsm Rugby Players

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Abstract:** **Although the amount and type of practice engaged in to develop elite athletes have been examined substantively in sports literature, few studies have reported on boarding school students. The purpose of this study was to examine the developmental activities of top MARA Junior Science College (MRSM) rugby players. Data on rugby related practice histories and milestones were collected from the semi-finalists (n=48 players) and the bottom four teams (n=48 players) during the MRSM Rugby 7's competition in 2019 using a retrospective rugby related activities questionnaire. Results showed the players were introduced to the sport only upon enrolling into the institution. Separate Factorial ANOVA 2 groups (top 4 vs bottom 4 teams) x 4 activities (match play, coach led, individual practice, unstructured play) and were analysed for the age range 13 to 15 and 16 to 17 years old. Findings for the 13 to 15 years age range showed a significant group x activity interaction. The top 4 teams engaged in more coach led practice hours (M=564.2 hours, SD=244.7) compared to the bottom 4 teams (M=317.1 hours, SD=206.4). Besides that, the top team players also engaged in more unstructured play (M=209.0, SD=226.3) compared to their unsuccessful counterparts (M=127.8, SD=123.6). Similar result was also reported showed in the 16 to 17 years old range age. The findings showed that successful MRSM rugby players not only engaged more in structured rugby practice sessions and but were involved in unsupervised rugby games as well.

***Keywords:** Coach led practice, unstructured play, rugby 7s, MRSM*

1.

1. INTRODUCTION

The MARA Junior Science College (MRSM) is one of the pioneer boarding secondary schools established by the Majlis Amanah Rakyat (MARA), a Malaysian government agency, with the objective of providing quality education for children especially from the poor and rural areas throughout Malaysia.The criteria to be selected into the college are, students must obtain at least 4 A's and 2 B's in the national level examination at the end of their primary school education or at least 6 A's and 2 B's in the national secondary schools examination at the end of third year of their secondary school education. The candidates' active participation in co-curricular activities were also taken into account [1]. Today, there are 53 MRSMs in Malaysia and apart from academic endeavours, all students are required to participate in sports and co-curriculum activities organized by the respective colleges.

There are also national level programmes organised by the Secondary Education Division of the agency, namely the MRSM Premier Rugby 7s competition, an annual event organized since 2004. This rugby competition involves all MRSM colleges and is considered a major

sporting event as MARA places emphasis on developing well rounded students who excel in both sports and academic [1]. Although the rugby competition has been held for the last 15 years, no attempts have been made to study the development of institution's rugby players. In line with the objectives of the competition, the main aim was not only to provide a healthy competition among the players but to identify and develop elite players who will represent the country in future. According to Ericsson, Krampe, and Tesch-Römer [2], who extended the study in chess [3], suggested that it is not simply training, but engagement in "deliberate practice" activities, the ingredient for the attainment to expertise. The deliberate practice theory can be defined as the result of time spent in very focused and effortful form of training [2]. In deliberate practice, individuals need to practice the difficult task or skills on their own in a way for them to be expert in the skills. For examples, expert athletes have been found to have invested in more hours of training in their sport compared to their non-elite counterpart ([4], [5]). Furthermore, experts athletes not only spend more hours in their training sessions, but they also devoted more time in specific training to develop the essential skills for expert performance ([6], [7],[8]). In a previous study, expert athletes from basketball, netball and hockey accumulated significantly more hours in competitions, organised team practice and one-on-one coach instruction than non-expert athletes [7]. Besides, the study on figure skaters showed the elite skaters spent more time in practice the technical aspects like jumps and spins compared to non-expert skaters [8]. The quality and quantity of hours spent in training differentiated expert and non-expert athletes are supported in sports and other domains (e.g., chess; [9]).

"Deliberate play" is an alternative set of activities that has been suggested to contribute in the development of expert performance. Introduced by Jean Côté and his colleagues [10], deliberate play is defined as unstructured games played at parks with modified rules in order just to have fun and interact with friends during leisure. In Côté et al.'s [10] stage-based model of athlete development, defined as the Development Model of Sports Participation (DMSP), three stages are suggested. The first stage is the sampling stage, which has a primary focus on deliberate play. When athletes become more matured and skilful, they moved to the next stage that is the specializing stage, which is a deliberate practice. They focused more on developing new skills and becoming more oriented to the next level to become expertise. The final stage of the development prior to expertise is the investment years, where athletes focus more on structured and specific practice during the training sessions and are usually conducted the supervision of adult coaches.

The study by Memmert, Baker, and Bertsch [11] showed an association between times spent in unstructured play activities and increased creativity in sports. In addition, Chow, Davids, Renshaw and Button [12] argued from a non-linear pedagogy perspective, that unstructured sport play during childhood provides optimal condition for display of variability, flexibility, and adaptability in motor performance that is key to a successful athletic performance. In order to achieve high performance, the athletes not only need more training hours but also need qualified coaches who can inspire them and guide them to achieve higher performance level.

In Malaysia, most of the boarding schools are involved in rugby competitions and it is compulsory to form a rugby team. Most of the parents who send their children to boarding schools, not only want them to succeed in academics but also in co-curricular field. Abernethy [13] believes that the sport itself has all the elements such as teamwork, discipline and resilience that make the sport different from others. This is one of the reasons why the MARA Secondary School Department chose rugby as the main sport for the students. To the best of the authors' knowledge, no study has been conducted on the development of rugby

players among the boarding schools in Malaysia. Therefore this study aimed to examine the activities that developed the MRSM rugby players. Data was collected comparing between the successful and not successful teams in the MRSM Rugby 7's competition. This study hypothesized that the successful teams would engaged in more structured and unstructured rugby related practice activities.

2.   RESEARCH METHODS

2.1. Participants

The participants of this study were MRSM rugby players aged 16 – 17 from the top four teams that qualified for the semi-finals round (hence identified as successful team) and the bottom four teams that qualified to the second round (hence identified as unsuccessful team) in the MRSM Rugby 7's Competition 2019. The practice history and milestones related to rugby were collected retrospectively from the top four teams (n = 48 players) and bottom four teams (n = 48 players) using an adapted self-report questionnaire [14], [15]. Permission to conduct the research was granted by the Secondary School Department of MARA. The participants also provided informed consent prior to the study.

2.2 Instrumentation

The adapted Participation History Questionnaire for rugby (aPHQ; [14]) was used to collect the data about the participation history of the athletes. The questionnaire was divided into three sections, sports specific milestones, engagement in activities related to the main sport and involvement in other sports. The first section was to obtain information about the age when the participants started significant milestones in rugby; playing, training and competing at various levels. The second section was information about the type of activities (match play, coach led, individual practice, play with friends) related to rugby and the amount of time (hours per week and months per year) the participants engaged in. The last section was about their engagement in other sports and the highest level of achievement.

2.3 Data Collection and Analysis

The questionnaires were completed by the participants after the competition with guidance by the researcher. The instruction and briefing were given to the participants to complete the questionnaires. The data were analysed by separating participants into two groups (the top four teams vs the bottom four teams) x four activities (competition, coach led, individual practice, play with friends) and were analysed separately using factorial ANOVA for the age range 13 to 15 years old and 16 to 17 years old.

3.   RESULTS AND DISCUSSION

The results for the 13 to 15 years old range showed a significant group with activity interaction $F(3.282) = 16.75$, $p<.001$. The top four teams engaged more in coach led practice hours ($M=564.2$ hrs, $SD=244.7$) compared to the bottom four teams ($M=317.1$ hrs, $SD=206.4$). Besides, the top four teams also engaged in more with unstructured play (play with friends) ($M=209.0$ hrs, $SD=226.3$) compared to the bottom four teams ($M=127.8$ hrs,

SD=123.6). No significant differences were found in other activities (competition and individual practice).

Similar result was shown in the 16 to 17 years old range age F (3.282) =31.45, p <.001. The mean and SD of the hours engaged in the activities according to the teams are presented in Table 1 and Table 2.

Table 1
Mean and standard deviation hours of rugby related activities between the top and bottom teams for 13 to 15 years old age range

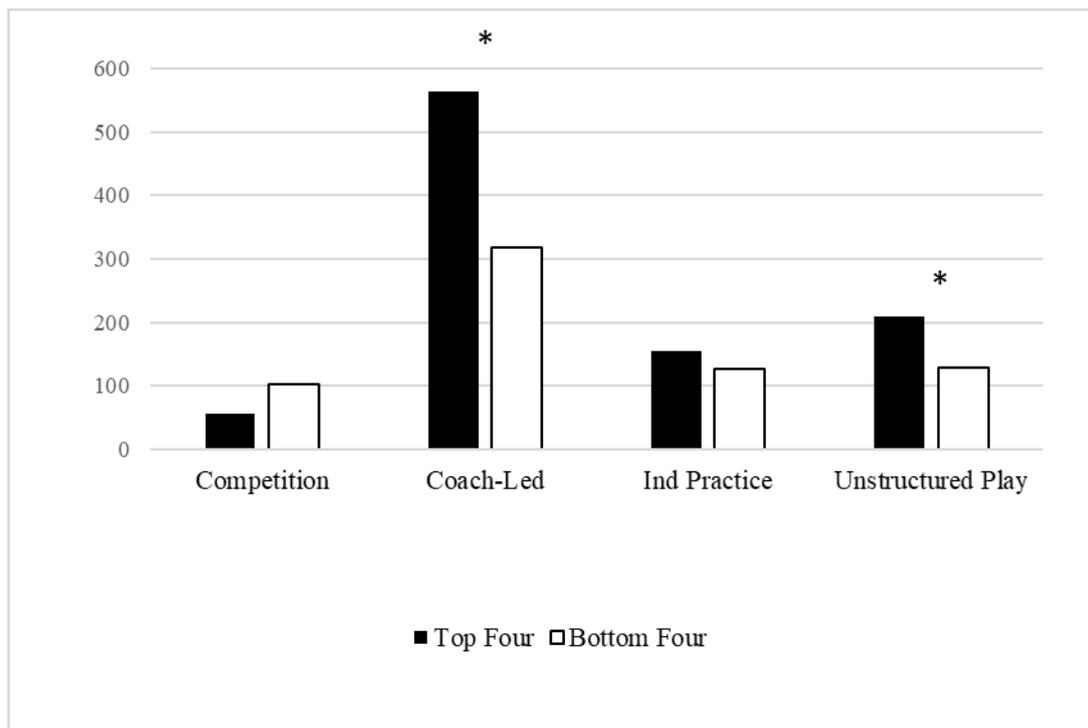| Activities	Teams	Mean (hrs)		SD
Competition	Top 4	56.0		48.7
	Bottom 4	103.1		115.0
Coach Led	Top 4	564.2		244.7
	Bottom 4	317.1		206.4
Individual Practice	Top 4	154.1		101.1
	Bottom 4	126.5		128.3
Unstructured Play (Play with friends)	Top 4	209.0		226.3
	Bottom 4	127.8		123.6

Figure 1: Hours Engaged in Rugby Activities Between Top and Bottom Four Teams (13-15 age range) *Significant difference, p <.05.

Table 2

Mean and standard deviation hours of rugby related activities between the top and bottom teams for 16 to 17 years old age range

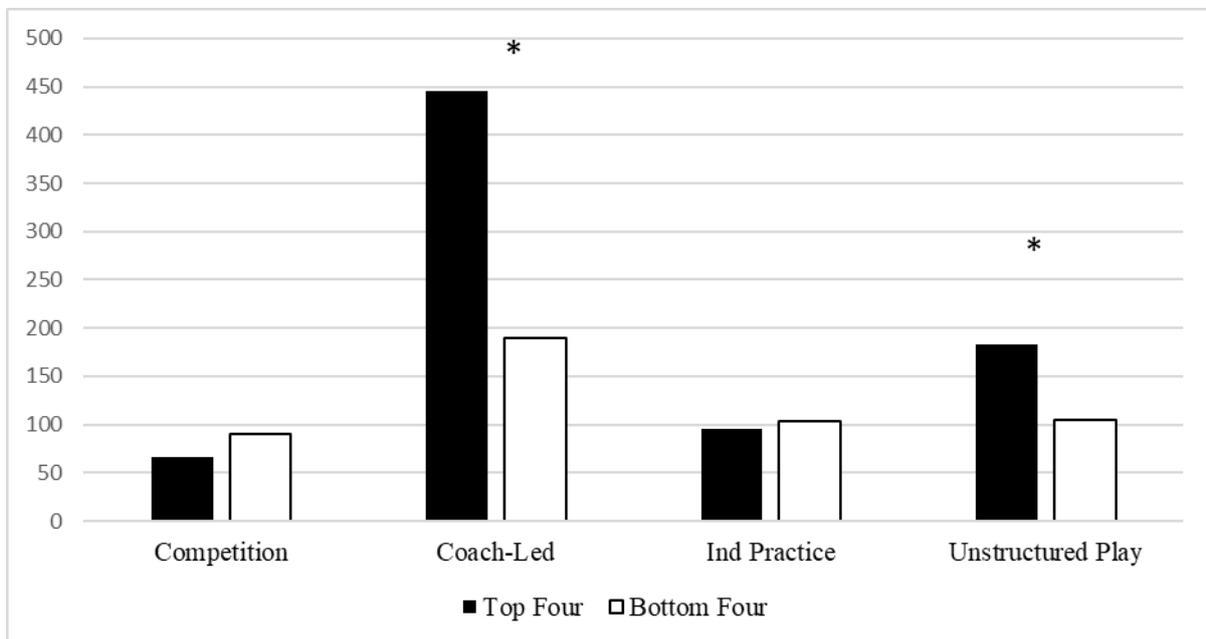| Activities	Teams	Mean (hrs)	SD
Competition	Top 4	66.5	45.9
	Bottom 4	90.1	70.2
Coach Led	Top 4	445.3	236.0
	Bottom 4	189.2	103.6
Individual Practice	Top 4	96.1	60.3
	Bottom 4	102.9	89.8
Unstructured Play (Play with friends)	Top 4	183.0	188.5
	Bottom 4	104.9	103.1

Figure 2: Hours Engaged in Rugby Activities Between Top and Bottom Four Teams (16-17 age range) *Significant difference, $p < .05$

In this study, the results showed that all MRSM rugby players only started to play rugby when they enrolled into MRSM (13 years old). None of the players ever played rugby during their primary school days. According to the Development Model of Sport Participation [10], there are two pathways to start in sports participation to become an elite athlete depending on the type of activity such as deliberate play and deliberate practice. But, for MRSM rugby players, the study showed that the top four teams were involved more in coach led training (deliberate practice) and also more hours in unstructured play (deliberate play) that make

them successful in MRSM Rugby 7's Competition in 2019. The top four teams accumulated more training hours compared to the bottom four teams. This is because MRSM is a boarding school which makes it possible for their rugby players to have more time to train with their coach and play with their friends during leisure time and weekends. It is compulsory for MRSM students to engage in physical activities in the evenings on weekdays and during leisure time that indirectly contributes to the success of the top four team to play on their own after school hours. The findings of this study also supported the deliberate theory introduced which suggests that "deliberate practice" is the main ingredient to become an elite athlete [2]. There is no doubt that the success of the successful rugby players in MRSM Rugby 7's 2019 was because of the high accumulation of both structured training (practice) and unstructured and informal (play) hours.

4.   CONCLUSION

The purpose of this study was to examine what activities that contributed to the development of elite MRSM rugby 7's players. This objective was achieved by comparing rugby related activities between the top and the bottom teams that participated in the 2019 MRSM Rugby 7's competition. The top teams accumulated more hours in coach led training and played unsupervised rugby on their own starting from age 13 to 17 years old compared to the bottom teams. Both teams showed no significant difference in rugby related milestones such as age first introduced to rugby and participating in competitions. Further studies should be conducted on the rugby players' physical fitness and the reasons why they chose rugby as their main sport compared to other sports. Besides, the comparison of coaching methods could also be conducted to identify the effective methods to develop elite rugby players.

5.   ACKNOWLEDGEMENTS

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