

**UNIVERSITI TEKNOLOGI MARA**

**COMPARISON OF PHYSICAL  
FITNESS QUALITIES BETWEEN  
FORWARDS AND BACKLINE  
POSITION IN UNIVERSITY  
RUGBY PLAYER**

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the requirements for the degree of

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## AUTHORS DECLARATION

I, Nasri Syafiq Bin Shamsudin Hereby, declare that; this work has not previously been accepted in substance for any degree, locally or overseas and is not being concurrently, submitted for this degree or any other degrees. This research project is the result of my independent work and investigation, except otherwise stated. I absolve Universiti Teknologi MARA (UiTM) and Faculty of Sports Science and Recreation for any blames as a result of my work.

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## ABSTRACT

Forwards and backline is two distinct playing positions in rugby. 8 out of 15 players are playing forwards positions while the other 7 players are playing backs positions. Based on positional differences, each player has different roles and physical requirements based on their playing position. In addition, training program for rugby players need to have the aspect of specificity where the training must be based on playing position. So, the purpose of this study was to compare physical fitness qualities (body composition, speed, agility, muscular strength, muscular endurance and cardiovascular endurance) between forwards and backline position in university rugby player. Total of 45 rugby players from 3 rugby teams which was the medalist for inter-faculty sports (SAF) participated in this study. All of them undergoes 6 physical fitness test which are skinfold caliper to assess body fat, 40 meters sprint to assess sprint speed, Illinois agility test to assess agility, 1RM bench press for muscular strength, 1 minute push ups for muscular endurance and multistage shuttle run to assess their cardiovascular endurance. The end of the result, the mean score of body composition for backs (M = 6.51, SD = 1.31) while for forwards (M = 9.93, SD = 2.07). Meanwhile the mean score of speed for backs (M = 5.60, SD = 0.44) while for forwards (M = 7.62, SD = 0.66). Furthermore, mean score of agility for backs (M = 16.55, SD = 0.42) while for forwards (M = 18.26, SD = 0.59). Mean score of muscular strength for backs (M = 66.25, SD = 10.18) while for forwards (M = 90.38, SD = 13.84) and mean score of muscular endurance for backs (M = 41.10, SD = 7.18) while for forwards (M = 51.20, SD = 9.61). Lastly, mean score of cardiovascular endurance for backs (M = 11.14, SD = 1.12) while for forwards (M = 8.67, SD = 0.84). These results show there is a significant difference of physical fitness qualities between forwards and backs in rugby ( $p < 0.05$ ). It can be concluded that there is a difference in physical fitness qualities between forwards and backs in rugby where forward rugby player have more percentage of body fat, greater muscular strength and muscular endurance compared to backline rugby player while backline rugby player have faster speed, better agility and greater cardiovascular endurance compared to forward rugby player.

*Keywords:* physical fitness qualities, forwards, backs, body composition, speed, agility, muscular strength, muscular endurance, cardiovascular endurance

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