

Exercise physiologists recognize aerobic capacity as the most important component in the athlete's physiological profile (Wilmore and Costil, 1988). The ability of the athletes to perform physical activities for prolonged periods of time is entirely dependent on their bodies' capacity to transport and utilize oxygen ( $VO_2$  max). Consequently this study assessed the aerobic capacity of Kenyan soccer players participating in the 2002/2003 National Premier League with a view to establishing the relationship between the players'  $vo_2$  max and their performance in the Premier League as well as the players'  $vo_2$  max and their playing positions.

A stratified random sampling procedure was used to select the teams used in the study. The sample comprised male soccer players of Tusker FC, Thika United FC, and Kenya Commercial Bank FC. A pre-test/post-test research design was used in this study. After the pilot study, the aerobic capacity assessment was carried out using multistage shuttle-run test. A retest was conducted after eight weeks in order to establish changes in the aerobic capacities of the players during the Premier League tournaments. The data obtained through this study were subjected to statistical analysis using Statistical Package of Social Science (S.P.S.S.). The data were presented in tables and analyzed using the one-way analysis of variance to test the research hypotheses. Inter group differences were also tested using multiple comparison of the t-test.

The study, found that there was increased aerobic capacity amongst all the players between the pre-test and the post-test. The study also indicated that, improved or high  $VO_2$  max add to the quality of play, since the results showed a perfect rank order between mean aerobic capacity and the teams' finishing position in the 2001/2002 Premier League which was used for selection of the subjects. Mean  $VO_2$  max for the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> teams were  $71.27 \text{ ml/min}^{-1}$ ,  $66.24 \text{ ml/min}^{-1}$  and  $65.78 \text{ ml/min}^{-1}$  respectively. The results were also a good indicator of how aerobic capacity varies with players' positional roles in the game of soccer, Midfielders recorded the highest mean aerobic capacity values of  $57.59 \text{ ml/min}^{-1}$  and  $69.98 \text{ ml/min}^{-1}$  in the pre-test and post-test respectively, while the goalkeepers who cover the shortest distance during the game of soccer recorded the lowest mean aerobic capacity values of  $51.88 \text{ ml/min}^{-1}$  and  $62.05 \text{ ml/min}^{-1}$ . The attackers recorded mean aerobic capacity values of  $55.76 \text{ ml/min}^{-1}$  and  $69.89 \text{ ml/min}^{-1}$ , while defenders recorded mean aerobic capacity values of  $53.99 \text{ ml/min}^{-1}$  and  $65.91 \text{ ml/min}^{-1}$  in pre-test and post-test respectively.

Therefore, following this study it was recommended that the Ministry of Gender, Sports, Culture and Social Services, Kenya Football Federation and various soccer clubs should develop physiological profiles for each player throughout the training period. This would help to determine whether the players are either under training or over training with a view of adopting the correct training regimen. Further studies in the same area nationwide should be carried out. Similar studies should be carried out on female soccer teams in Kenya. Additionally further studies on direct aerobic capacity assessment using laboratory procedures should be conducted on Kenyan soccer teams. This is because laboratory measures yield more accurate and thus more reliable results on aerobic capacity.