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## **TITLE: ASSESSING THE CORRELATION BETWEEN THE CHOICE OF MAIN CARBOHYDRATE ENERGY STAPLE AND THE PREFERENCE RANKING BY VERY ACTIVE MANUAL WORKERS IN NAIROBI**

### **ABSTRACT**

Manual workers are some of the most active people in our society. Work output is driven by energy supply from the food we eat. The ability to balance energy consumption and expenditure is crucial, especially for work productivity and nutritional health. However, studies on food choice for work productivity are limited. The objective of this study was to determine the correlation between the choice of the main carbohydrate energy staple and preference ranking by Very Active Manual Workers (VAMW) in Nairobi. Questionnaires were administered to 322 respondents categorized into three groups: VAMW, and moderately active civil servants (CS) and university students (US). Respondents were asked to state their main carbohydrate staple and rank six commonly consumed carbohydrate foods from most preferred to the least preferred. Ugali was ranked first with a mean rank value of  $1.134 \pm 0.492$ , followed by chapati with a mean rank of  $2.588 \pm 0.976$ , and the third was rice with a mean rank of  $3.247 \pm 1.242$ . Irish potato came fourth with a mean rank of  $4.299 \pm 0.970$ , and bananas had a mean rank of  $4.588 \pm 1.068$ . The “others” mixed category was least preferred, ranked sixth with a mean rank of  $5.165 \pm 1.297$ , 95% confidence level. Further analysis indicated a significant difference in preference ranking of carbohydrate staples by the VAMW,  $F(0.05, 5,576)$ ,  $P < .0001$ . The pairwise comparison of mean ranks indicated a significant difference between the rank means of all pairs, but no significant difference between mean ranks of rice versus chapati, and Irish potatoes versus bananas. Correlation analysis comparing the main carbohydrate staple versus occupation (activity level), revealed a very weak correlation;  $r$  value 0.024 for VAMW and  $r$  value 0.109 for all respondents, but a moderate correlation between the main carbohydrate staple versus preference ranking-  $r$  value 0.516 for VAMW; 0.598 for US; 0.595 for CS and  $r$  value 0.562 for combined groups. Regression analysis indicated the main staple was a good predictor of preference ranking, 32.4%,  $F(6, 303) = 24.167$ ,  $p < .000$ , thereby rejecting the hypothesis that there is no correlation between the main carbohydrate staple and preference ranking by VAMW. Results suggested that approximately 29.7% of the variation in the preference ranking was predicted by the main staple of VAMW, compared to for 32.4% for all respondents combined. This indicates that activity level is a good predictor of preference ranking, and other factors contribute to preference ranking of carbohydrate energy staple by VAMW.

**Keywords:** “Ugali,” Preference ranking, Carbohydrate energy staple, Very active manual workers