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DAILY DIETARY INTAKE OF TOTAL PHENOLICS AND TOTAL FLAVANOIDS FROM CONSUMPTION OF RICE (*ORYZA SATIVA L.*) VARIETIES COMMERCIALLY AVAILABLE IN SRI LANKA

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Asian rice (*Oryza sativa L.*), the dietary staple of Sri Lanka, contains bioactive compounds such as phenolics and flavonoids with multiple therapeutic benefits. As alterations in the net bioavailability occures during domestic cooking, the analyses should be carried out in cooked, table-ready form to reach precise dietary estimations. Total phenolic (TPC) and total flavonoid content (TFC) were quantified in cooked grains of 25 composite rice samples representing 10 commonly consumed varieties available in Sri Lanka. The best varieties with the highest contribution to recommended dietary intakes was determined. Aqueous extracts of lyophilized cooked grain powder (n=25) were quantified for TPC and TFC spectroscopically (triplicates) and expressed as Gallic Acid Equivalents (GAE) and Quercetin Equivalents (QE) mg per 100g portion of cooked rice. Data extrapolated with median rice consumption data by Sri Lankan adults (386.5g person-1 day-1). Percentage contribution of TPC was inferred with mean recommended daily intake values at 1.5g person-1 day-1 while TFC was deduced at 0.5g person-1 day-1 in accordance with dietary recommendations and evaluated across rice varieties; traditional/heirloom (*Pachchaperumal (Siyapath-el), Kaluheenati, Suwandel*)), improved (*Nadu*, *Samba*, *Kekulu*), imported (*Indian Basmati*) and pericarp (red/white) colours. The median (Interquartile Range) TPC and TFC for 100g portion of cooked rice was 72.88 (116.52–58.64) mgGAE and 70.20 (80.61–63.06) mgQE, respectively, showing a significant inter-categorical variation (p<0.05). TFC resulted in a similar, non-significant trend (p>0.05). TPC and TFC intakes from traditional varieties were significantly greater than improved or imported varieties (p<0.05). Red pericarp grains contributed a significantly higher percentage than white pericarp grains(p<0.05). The median (IQR) % contribution of TPC and TFC from rice was 18.78% (30.02–15.11) and 54.26% (62.31–48.75), respectively. Higher consumptions ($CI_{75\%}$=447g person-1 day-1) yielded a ~2.8-fold increase in % contribution of TPC and ~1.2–fold increase in TFC. The highest % contribution (TPC=52.52%; TFC=79.35%) resulted in *Pachaperumal* (*Siyapath el*) variety, while minimum values (TPC=12.71%; TFC=42.07%) were reported by *white Kekulu* grains. Imported *Indian Basmati* reported 13.26% and 49.41% for TPC and TFC, respectively. Sri Lankan rice is a good source of bioactive compounds, and daily consumption of cooked rice contributed to >18% and >50% of the recommended dietary intake of phenolics and flavonoids, respectively.

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