

64

FAMILIAL EFFECTS ON PHYSIOLOGICAL VARIABLES IN PREADOLESCENT BOYS

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This paper presents the findings of inter-pair correlation coefficients for several physiological variables made on 40 pairs of preadolescent brothers. The means (\pm SD) for age, Wt & Ht of the younger & older brothers were 8.5 ± 1.0 & 10.8 ± 1.0 yrs, 25.6 ± 4.7 & 34.6 ± 9.5 kg, & 126.7 ± 7.8 & 138.6 ± 8.7 cm, respectively. Results of the study indicated significant correlations ($*P < .05$ & $**P < .01$) between the younger and the older brothers in absolute VO_{2max} ($r = .72^{**}$), VE_{max} , L/min ($r = .80^{**}$), HR_{max} ($r = .65^{**}$), absolute ventilatory anaerobic threshold, VAT ($r = .71^{**}$), VAT as % of VO_{2max} ($r = .76^{**}$), O₂ pulse ($r = .65^{**}$), O₂ pulse index ($r = .63^{**}$), % of day-time $HR > 159$ bpm ($r = .52^{**}$), fasting triglycerides ($r = .58^{**}$), & fasting blood glucose ($r = .39^{*}$). However, no significant correlations between brothers were found in VO_{2max} relative to body weight ($r = .22$), RQ ($r = .11$), % of day-time $HR > 139$ bpm ($r = .28$), resting systolic ($r = .02$) & diastolic ($r = .08$) blood pressures, total cholesterol ($r = .07$), HDL-cholesterol ($r = .25$), & LDL-cholesterol ($r = .10$). It can be concluded that familial effects were exhibited on several physiological variables in preadolescent boys.