Abstract

An association between severe iodine deficiency and poor mental development has been found in many studies. We examined the relationship between moderate or mild iodine deficiency and intellectual capacity in order to determine whether problems common to severe iodine deficiency (including mental retardation) also emerge in a more subtle form. We also wished to know whether the classic methodology (comparing iodine-deficient zones with nondeficient zones) is the most adequate, and propose to combine this grouping by zones with urinary iodine presented by individuals in each zone. We measured IQ, manipulative and verbal capacity, attention, visual motor ability and disruptive behaviour, variables that have barely been studied in this kind of investigations. The sample comprised 760 schoolchildren from the province of Jaén (southern Spain). Our results show that children with low levels of iodine intake and with urinary iodine concentration lower than 100 μg/litre had a lower IQ and displayed more disruptive behaviour than children with high levels of the criteria. The other variables were not associated with iodine deficiency.