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Nutritional Supplementation in the Management of Childhood/Youth Aggression: A Systematic Review

Authors: Sabrina M. Wang, Rameen Qamar, Fahad Manzar Qureshi, Laura La Chance, Nathan J. Kolla, Barna Konkolÿ Thege **Abstract:** Elevated level of aggressive behaviour in children and youth can lead to impairments in family, social or academic functioning. The aim of the present study was to critically review the evidence on the effectiveness of nutritional supplements in reducing aggression in children and youth. The Cochrane Library, EMBASE, MEDLINE, ProQuest Dissertations & Theses, PsycINFO, and PubMed data bases were searched for relevant studies. Altogether, 22 studies met inclusion criteria; 13 investigated the effect of macronutrients (fatty acids and amino acids), 6 studies investigated the effect of micronutrients (vitamins and minerals), while 3 studies investigated a combination of macro and micronutrients. Out of the 22 studies, 7 reported a beneficial effect of nutritional supplementation (vitamins and minerals, essential fatty acids, or a certain combination of these). Eight studies did not report a significant beneficial effect of nutritional supplementation (essential fatty acids, vitamin D, and L-tryptophan), while 7 studies reported mixed effects (vitamin B6, essential fatty acids alone and in combination with vitamins and minerals, and carnitine). The results overall suggest that there may be a role for broad-range vitamin and mineral supplements in the treatment of aggression in youth and children.

Keywords: aggression, children, youth, nutritional supplementation, micronutrient, macronutrient

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