

META-ANALYSIS THE EFFECTIVENESS OF WEB-BASED HEALTH PROMOTION ON VEGETABLES CONSUMPTION AMONG CHILDREN IN AMERICA, AUSTRALIA, AND EUROPE

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ABSTRACT

Background: Over 340 million children and adolescents aged 5-19 were overweight or obese in 2016. The fundamental cause of obesity and overweight are an increased intake of energy-dense foods that are high in fat and sugars and an increase in physical inactivity. Television and computer viewing are hypothesized as contributing factors because of their documented role in encouraging consumption of highly advertised foods that may lead to the replacement of fruits and vegetables. This study aimed to systematically review the effectiveness of web-based health promotion on vegetables consumption among children in America, Australia, And Europe.

Subjects and Method: The electronic databases, such as PubMed, Science Direct, Research Gate, and Google Scholar, were explored. The systematic search was restricted to randomized controlled trials, studies published between 2010 and 2021, and in the English language. The keywords were “Intervention Health Promotion Web-Based” AND “Non Intervention Health Promotion Web-Based” AND “Child” AND “Vegetables”. Eligibility criteria (PICO framework) for participants including: Population (P)= children aged 2-6 years old, Intervention (I)= web-based health promotion, comparison (C)= without web-based health promotion, and Outcome (O)= vegetables consumption. Eligible studies were exported to RevMan software 5.3 for data analysis.

Results: 6 studies from America, Australia, and Europe were included for meta analysis. There was high heterogeneity between groups ($I^2= 96\%$; $p<0.001$), therefore this meta analysis conducted using Random Effect Model (REM). Intervention using web-based health promotion elevated vegetables consumption in children compared to without web-based health promotion intervention (Standardized Mean Difference= 0.64; 95% CI= 0.07 to 1.20; $p= 0.030$).

Conclusion: Intervention using web-based health promotion is effective to elevate vegetables consumption in children.

Keywords: health promotion, web-based intervention, vegetables consumption, randomized controlled trial

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