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A systematic review and meta-analysis of the effectiveness of peer support to reduce cardiovascular risk

C.T. McEvoy^{1,2}, E. McAuley¹, S.E. Moore¹, M. Cupples², F. Kee², I.S. Young¹,
M.C. McKinley^{1,2} and J.V. Woodside^{1,2}

¹Nutrition Research Group, Centre for Public Health, Queen's University Belfast, BT12 6BJ, UK and

²UK Clinical Research Collaboration, Centre of Excellence for Public Health, Queens University Belfast, Grosvenor Road, Belfast, BT12 6BJ, UK

Lifestyle interventions are effective for prevention of cardiovascular disease (CVD) but are generally resource intensive and prohibitively expensive to scale-up for wider public health benefit⁽¹⁻²⁾. Social support provided by lay people (peer support) is an alternative low-cost approach to facilitate self-management of lifestyle behaviours⁽³⁾, but the effect of peer support on health outcomes is not clear. This systematic review aimed to evaluate the effect of peer support on CVD risk. The protocol was registered with PROSPERO: CRD42014006291.

PubMed, EMBASE and CINAHL were systematically searched to identify randomised controlled trials (RCTs) addressing the effect of peer support on CVD events or CVD risk factors including, obesity, markers of diabetes risk, blood pressure and lipid levels, in adults > 18 years. Data extraction and assessment of bias were performed by two independent reviewers and data were pooled using a random-effects meta-analysis.

Twenty-six RCTs were included in the review and almost half of studies were conducted in ethnic minority or low income groups. None of the included trials reported CVD events as an outcome. Peer support showed significant improvements in glycaemic control (HbA1c -0.22% [95% CI $-0.40, -0.04$] $P = 0.02$) and obesity (BMI -0.83 kg/m^2 [95% CI $-1.58, -0.07$], $P = 0.03$) in comparison to control, with evidence of significant heterogeneity across studies ($I^2 = 49\%$, and 59% respectively) and funnel plot asymmetry. There was no significant effect of peer support on blood pressure (systolic blood pressure -0.90 [95% CI, $-3.05, 1.24$]). Most RCTs ($n = 18, 69\%$) were graded as high risk of bias particularly in selection, performance and attrition bias. No consistent pattern of effect was found for delivery of peer support (group, peer mentor, web/online, telephone/texting) in individual studies.

Despite some evidence supporting a beneficial effect of peer support for established cardiovascular risk factors, trials were heterogeneous and most were of poor methodological quality, which limits the ability to draw firm conclusions. There is a need for further well-designed RCTs to evaluate the effect and sustainability of peer support on cardiovascular disease risk.

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3. Heisler M (2007) *Diabetes Spectr*, **20**, 214–221.