

Additional file 3. Quality assessment of included studies

Study (Author, published year)	Risk of bias items							
	Selection bias due to inadequate generalization of randomized sequence. (Only RCT were assessed)	Selection bias due to inadequate concealment of allocations prior to assignment. (Only RCT were assessed)	Performance bias due to knowledge of the allocated interventions by participants and personnel during the study or deviations from	Detection bias due to knowledge of the allocated interventions by outcome assessors.	Attrition bias due to amount, nature or handling of incomplete outcome data	Reporting bias due to selective outcome reporting	Confounding bias due to one or more prognostic variables predict the intervention effect. (Only non-RCT were assessed)	Selection bias due to selection into the study based on characteristic observed after the start of intervention. (Only non-RCT)
Almeida et al. 2015	Low risk	Unclear risk	Low risk	Unclear risk	Low risk	Low risk	/	/
Armitage et al. 2014	Low risk	Low risk	Unclear risk	Low risk	Low risk	Unclear risk	/	/
Armitage et al. 2017	Low risk	Low risk	Unclear risk	Low risk	High risk	Unclear risk	/	/
Ayre et al. 2020	Low risk	High risk	Unclear risk	High risk	Low risk	Low risk	/	/
Bélangier-Gravel et	Low risk	Low risk	High risk	Low risk	Low risk	Unclear risk	/	/
Breslin et al. 2019	Unclear risk	Low risk	High risk	Low risk	Unclear risk	Unclear risk	/	/
Broekhuizen et al.	Low risk	Low risk	Low risk	Unclear risk	Low risk	Low risk	/	/
Cheung et al. 2017	Low risk	Low risk	Low risk	Low risk	High risk	Low risk	/	/
de Freitas Agondi et	Low risk	Unclear risk	High risk	Low risk	Low risk	Unclear risk	/	/
Duan et al. 2018	Unclear risk	Unclear risk	Low risk	Low risk	Low risk	High risk	/	/
Groeneveld et al.	Low risk	High risk	High risk	Low risk	Unclear risk	Low risk	/	/
Hayes et al. 2020	Low risk	Unclear risk	Low risk	Unclear risk	High risk	High risk	/	/
Helena et al. 2014	Low risk	Low risk	Unclear risk	Low risk	Low risk	Unclear risk	/	/
Jackson et al. 2005	Unclear risk	Low risk	Unclear risk	Unclear risk	Low risk	Unclear risk	/	/
Janssen et al. 2014	Low risk	Low risk	Low risk	Low risk	Low risk	Unclear risk	/	/
Kim et al. 2019	Low risk	Low risk	Low risk	Low risk	High risk	High risk	/	/
Luszczynska 2006	Low risk	Unclear risk	Unclear risk	Unclear risk	Unclear risk	Unclear risk	/	/
Luszczynska, Scholz	Low risk	Low risk	Low risk	High risk	Low risk	Unclear risk	/	/
Luszczynska,	Low risk	Low risk	Unclear risk	Low risk	Low risk	Unclear risk	/	/
Obara-Golebiowska	Unclear risk	Unclear risk	Unclear risk	Unclear risk	Low risk	High risk	/	/
Rodrigues et al.	Low risk	Unclear risk	Unclear risk	Unclear risk	Low risk	Unclear risk	/	/
Rodgers et al. 2014	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	/	/
Scholz et al. 2007	Low risk	Low risk	Unclear risk	Low risk	Low risk	High risk	/	/

Scholz et al. 2013	Low risk	Low risk	High risk	Unclear risk	High risk	High risk	/	/
Sniehotta et al. 2005	Low risk	Low risk	Unclear risk	Unclear risk	Unclear risk	High risk	/	/
Sniehotta et al. 2006	Low risk	Unclear risk	Unclear risk	Unclear risk	Low risk	Unclear risk	/	/
Sniehotta et al. 2011	Low risk	High risk	High risk	Low risk	Low risk	Low risk	/	/
Soureti et al. 2011a	Low risk	/	/					
Soureti et al. 2011b	Low risk	/	/					
Stevens et al. 2001	Low risk	Unclear risk	Unclear risk	Low risk	Low risk	High risk	/	/
Ströbl et al. 2013	High risk	Low risk	Unclear risk	Unclear risk	Low risk	Low risk	/	/
Svetkey et al. 2008	Low risk	High risk	/	/				
Thoolen et al. 2009	Low risk	Unclear risk	High risk	Unclear risk	Low risk	Low risk	/	/
van Genugten et al.	Low risk	Low risk	Low risk	Unclear risk	High risk	Unclear risk	/	/
Vinkers et al. 2014	Low risk	Unclear risk	Low risk	Unclear risk	Low risk	Low risk	/	/
Wilczynska et al.	Low risk	Low risk	High risk	Unclear risk	Low risk	Low risk	/	/
Wooldridge et al.	Low risk	Low risk	High risk	Low risk	Low risk	Unclear risk	/	/
Zakrisson et al. 2019	Low risk	Low risk	Low risk	Low risk	Unclear risk	High risk	/	/
Zandstra et al. 2010	Low risk	Unclear risk	Unclear risk	Unclear risk	Low risk	High risk	/	/
Silva et al. 2020	Low risk	Low risk	Unclear risk	Low risk	Low risk	Low risk	/	/
Christiansen et al.	Low risk	/	/					
Gagnon-Girouard et	Unclear risk	Unclear risk	Low risk	Low risk	Low risk	Unclear risk	/	/
Miller et al. 2016	High risk	Unclear risk	Unclear risk	Unclear risk	Low risk	Unclear risk	/	/
Kwasnicka et al.	Low risk	/	/					
Osborn et al. 2018	Low risk	High risk	High risk	Low risk	Low risk	Low risk	/	/
Boekhout et al. 2018	/	/	Low risk	Low risk	High risk	Low risk	High risk	Low risk
Dombrowski et al.	/	/	High risk	Low risk	Unclear risk	High risk	High risk	Low risk
Fleig et al. 2011	/	/	Low risk	High risk	Low risk	Low risk	High risk	High risk
Göhner et al. 2012	/	/	Low risk	Low risk	Unclear risk	Low risk	High risk	Low risk
Leung et al. 2019	/	/	High risk	Low risk	Unclear risk	High risk	Low risk	Low risk
Richardson et al.	/	/	Low risk	Low risk	Unclear risk	Low risk	Low risk	High risk
Kivelä et al. 2020	/	/	Unclear risk	Low risk	Unclear risk	Low risk	High risk	High risk