

Multimedia Appendix 4: Frequency of BCTs used in the included studies

BCT label	BCT group	Example of how the BCT was used	Frequency of use (%)	Studies where found
<b>5.1 Information about health consequences</b>	Natural consequences	<i>"...The website contained a glossary and information resources about CHD, diet, exercise and smoking..."<sup>16</sup></i>	18 (78%)	1-4, 6, 8, 10-11, 13-18, 20-23
<b>1.1 Goal setting (behaviour)</b>	Goals and planning	<i>"...Together with a MyCor physician, individuals goal for blood pressure, footsteps and weight were defined..."<sup>2</sup></i>	17 (74%)	1-4, 8-15, 17-20, 22
<b>2.3 Self-monitoring of behaviour</b>	Feedback and monitoring	<i>"...Following hospital discharge, participants were asked to log their daily activity on the CardioFit website..."<sup>19</sup></i>	11 (48%)	2, 4, 7-8, 10, 12, 17, 19, 21-23
<b>3.2 Social support (practical)</b>	Social support	<i>"...All participants received detailed programme information and 1h of face-to-face training on technology use..."<sup>22</sup></i>	11 (48%)	1-2, 6, 11, 14, 16-17, 19, 21-23
<b>4.1 Instruction on how to perform the behaviour</b>	Shaping knowledge	<i>"...Tutorials were organised to engage self-control processes including exercise planning, goal-setting, monitoring and self-regulation, and relapse prevention..."<sup>19</sup></i>	10 (43%)	3, 8-9, 11, 13-14, 18-21
<b>2.2 Feedback on behaviour</b>	Feedback and monitoring	<i>"... patients were provided an individual, automatic feedback report that was sent to their smartphone once weekly..."<sup>2</sup></i>	10 (43%)	1-3, 8, 10-12, 19, 22-23
<b>2.6 Biofeedback</b>	Feedback and monitoring	<i>"...In general, these patients were monitored electrocardiographically for their first 4 to 6 sessions with exercise intensity guided by a progressive heart rate prescription of 65% to 85% of their maximal measured heart rate from the baseline stress test..."<sup>1</sup></i>	9 (39%)	1, 2, 4, 7, 12, 14-15, 18, 22
<b>3.1 Social support (unspecified)</b>	Social support	<i>"...Social reinforcement network that encourages the adoption and maintenance of a healthier lifestyle for improved wellness..."<sup>23</sup></i>	9 (39%)	3, 8, 12, 16, 19-23
<b>9.1 Credible source</b>	Comparison of outcomes	<i>"...Role model video vignettes..."<sup>17</sup></i>	8 (35%)	1, 4, 6, 8, 13, 17, 20-21
<b>2.4 Self-monitoring of outcomes of</b>	Feedback and monitoring	<i>"...Each participant was equipped with a smartphone preinstalled with health diary and activity monitoring</i>	7 (30%)	2, 4, 15, 18, 21-23

<b>behaviour</b>		<i>applications; blood pressure monitor and weight scale...</i> <sup>22</sup>		
<b>1.4 Action planning</b>	Goals and planning	<i>"...The home programme consisted of regular exercise prescription..."</i> <sup>17</sup>	7 (30%)	1, 3-4, 9, 14, 17, 20
<b>8.7 Graded tasks</b>	Repetition and substitution	<i>"...Exercise intensity was 40% weeks 2 to 4, 50% weeks 5 to 6, 60% weeks 7 to 8, 70% weeks 9 to 10, and 80% weeks 11 to 12..."</i> <sup>15</sup>	6 (26%)	5, 8, 10-11, 15, 23
<b>2.7 Feedback on outcome(s) of behaviour</b>	Feedback and monitoring	<i>"...If patients confirmed these values, messages to consult their physician appeared, as these changes in weight, blood pressure, or lab values could represent a potential danger to their health..."</i> <sup>23</sup>	5 (22%)	2, 4, 21-23
<b>2.5 Monitoring of outcomes of behaviour without feedback</b>	Feedback and monitoring	<i>"...Participants were asked to wear their heart rate monitors when exercising and upload their exercise data at least twice per week to the vCRP..."</i> <sup>14</sup>	5 (22%)	3, 5, 7-8, 24
<b>1.2 Problem solving</b>	Goals and planning	<i>"...Participants were asked to develop strategies to overcome barriers to increasing their physical activity..."</i> <sup>12</sup>	4 (17%)	2, 6, 13, 23
<b>11.2 Reduce negative emotions</b>	Regulation	<i>"...Emotional support was provided on an as needed basis via email..."</i> <sup>21</sup>	4 (17%)	12-13, 16-17
<b>7.1 Prompts/cues</b>	Associations	<i>"... Have you gone for your walk today jane?..."</i> <sup>6</sup> (message)	3 (13.0%)	6, 8, 10
<b>1.5 Review behaviour goals</b>	Goals and planning	<i>"...Baseline and post-programme appointments between the registered dietician and patients at the telemedicine-supported site were conducted by telemedicine..."</i> <sup>9</sup>	3 (13%)	3, 16, 23
<b>1.3 Goal setting (outcome)</b>	Goals and planning	<i>"...The PHA provides user-friendly and interactive access to... targets, plans..."</i> <sup>23</sup>	3 (13%)	4-5, 7
<b>2.1 Monitoring of behaviour by others without feedback</b>	Feedback and monitoring	<i>"...In addition, video-recorders (cassette or DVD) for physiotherapy and 1-lead ECG devices were provided. An electronic health record was prepared for each patients and the patients general practitioner informed..."</i> <sup>20</sup>	2 (9%)	7, 19

<b>3.3 Social support (emotional)</b>	Social support	<i>"...Providing alternative coping strategies when the patient appeared to use inappropriate strategies..."<sup>13</sup></i>	2 (9%)	17, 20
<b>10.3 Non-specific reward</b>	Reward and threat	<i>"...The PHA provides user-friendly and interactive access to... awards that encourages the adoption and maintenance of a healthier lifestyle for improved wellness..."<sup>23</sup></i>	1 (4%)	4
<b>12.1 Restructuring the physical environment</b>	Antecedents	<i>"...The virtual terrain in our study consisted of a 5-km-long straight (or curved) stretch of road, grass and trees with a mountain background..."<sup>7</sup></i>	1 (4%)	5
<b>12.5 Adding objects to the environment</b>	Antecedents	<i>"...The images were projected from behind the viewer through 3 projectors connected with computers..."<sup>7</sup></i>	1 (4%)	5
<b>11.1 Pharmacological support</b>	Regulation	<i>"...The smoking cessation tele-coaching program included nicotine replacement therapy..."<sup>11</sup></i>	1 (4%)	10
<b>6.1 Demonstration of the behaviour</b>	Comparison of behaviour	<i>"Video role model messages"<sup>8</sup></i>	1 (4%)	13
<b>6.2 Social comparison</b>	Comparison of behaviour	<i>"Video role model messages"<sup>8</sup></i>	1 (4%)	13
<b>1.7 Review outcome goals</b>	Goals and planning	<i>"...You're a few weeks into the program. Well done! Time to add a new goal - maybe you are ready to think about a long-term goal this time..."<sup>8</sup> (message)</i>	1 (4%)	13
<b>10.4 Social reward</b>	Reward and threat	<i>Paper listed the behaviour change techniques used in the intervention. Social reward was one of the BCT's used.</i>	1 (4%)	16
<b>1.8 Behavioural contract</b>	Goals and planning	<i>"...Provided patients with written information that included the name, frequency and action of their medications..."<sup>4</sup></i>	1 (4%)	22