

Appendix 5. Complete overview of results on mHealth lifestyle applications

Author year	Focus	Usability				Acceptability			Effectiveness
		Actual use	Interest	Appropriateness	Ability	User satisfaction	Appreciation	Recommendation	
van Zutphen 2008	Fruit, vegetables, smoking, folic acid, alcohol	59% of sent quiz emails were opened and of those 85% of the questions were accessed. 37% of the practical tips 12% of links to related websites were used.			96% of respondents (n=163) evaluated the program as easy to understand		81% of respondents (n=163) evaluated the program as reliable.		
Bot 2009	Fruit, vegetables, smoking, folic acid, alcohol	16% of participants opened all quiz emails received. 18% of participants never opened a quiz email. 27% of participants ceased participation.					78% of the respondents (n=3763) showed a high or intermediate appreciation.		
Dalrymple 2013	Fruit, vegetables, smoking, folic acid, alcohol		Many participants expressed an interest in continuing to seek health information on the internet.			All respondents found the program was "very" or "somewhat" helpful (n=7).	All respondents found the program was "very" or "somewhat" interesting (n=7).		
Song 2013	Vitamins, morning sickness,			65% agreed/strongly agreed that the	80% agreed or strongly agreed that it was easy to				

	foods, abdominal pains			information was easy to understand.	text their questions. 65% agreed or strongly agreed using the text message service made finding answers quick and easy.				
Gazmararian 2014	Fruit, vegetables, physical activity	95 % of the respondents (n=50) regularly read all messages throughout the study.	88 % of the respondents (n=50) planned to continue being enrolled.		96% of the respondents (n=50) reported receiving messages without interruption.				
van Dijk 2016	Fruit, vegetables, smoking, folic acid, alcohol								Effectiveness on all patients: Vegetable intake: improvement of 20.9% (6 weeks) and increase up to 26.3% (6 months) - Fruit intake improvement by 36.1 and 38.4% (6 weeks and 6 months), - Inadequate folic acid use: decrease of 53.6% and 56.3%, - Tobacco and alcohol use were reduced by 23.8% and 27.0% at 6 weeks and 6 months.
Evans 2015	Fruit, vegetables, prenatal vitamins, smoking, alcohol								No significant difference in health behavior between intervention and controls. Significant lower self-reported alcohol consumption in high dosage intervention group.
Pollak 2014	Weight control	86% of the respondents in the PregCHAT text arm reported reading their texts and responded to their texts.				Women in the PregCHAT text arm rated the program as helpful (64% rated 5 or higher on a 7-point Likert item)		80 % of the women in the PregCHAT text arm would recommend the program to a friend.	There was a non-significant difference in mean gestational weight gain 6 pounds less for women who completed the intervention, between the PregCHAT arm and the Txt4Baby arm. No differential treatment effect was found in self-reported physical activity or the nutrition score.

Knights- Agarwall 2015	Weight control		Most women expressed desire to continue using the application.		Women found the application generally simple to use.	70% found the weight gain graph helpful. 80% found the nutrition advise helpful or very helpful.	Participants enjoyed using the application.		
Soltani 2015	Weight control		Some participants suggested continuing the intervention postnatally				Participants liked the holistic nature of the intervention.		Mean GWG; 6.65 in intervention group vs 9.74 in controls. (NB: No statistical analysis were performed due to small sample size)
Herring 2016	Weight control					96% reported that the skills they learned in the program were extremely helpful (at least an 8 on a 10-point scale); 96% found the text messages extremely useful. 82% found the coach calls extremely useful. 87% reported the program was extremely successful in changing eating habits.			Weight gain was significantly reduced in the intervention group compared to usual care (37% vs. 66%, P 0.033). No significant differences in neonatal or obstetric outcomes were found.
Choi 2015	Physical activity	78% response rate of daily messages at two weeks participation	Response rate dropped to 24% at ten weeks of participation.						Intervention participants tend to increase in daily steps compared to control participants but not significantly different.

Fujioka 2012	Smoking cessation								The rate of non-smoking was 71.1% of participants who completed the study (n=48). Carbon monoxide exhalation levels significantly decreased (from 6.43 +/- 4.5 ppm at the beginning to 0.7 +/- 1.0 ppm in 1 month, to 0.29 +/- 1.08 in 3 months (P < 0.001).
Naughton 2012	Smoking cessation	Of the MiQuit participants, the response rates to assessment text messages sent: 3 week smoking text message: 64% of the intervention arm, at 7 weeks: 51%.	9% of the MiQuit participants discontinued the texts.	24% of the MiQuit participants thought the texts were annoying. 26% felt they had received too many messages.			Between 81% and 96% of the MiQuit participants rated the messages as helpful to some degree.		At 3-month follow-up, there was no statistically significant difference between intervention and controls. (NB: the trial was not powered to detect a group difference on smoking outcomes)
Naughton 2013	Smoking cessation		Participants felt they would read all the texts.	Participants did not feel the approach of the intervention was inappropriate.	Participants think the tool is highly convenient.				
Pollak 2013	Smoking cessation	86% of women in both groups reported reading "all or most" of the support messages. Women in the SGR arm respond to 68% of alert texts within 60 min.				Women found the program helpful (mean score of 6 out of 7 in a 7-point scale).	Women found the program to be acceptable (mean score of 6 out of 7 in a 7-point scale)	Most women would recommend the program to a friend, with 78% in both arms reporting 7 in a 7-point scale.	The intervention group tends to a lower prevalence of smoking: 7-day point prevalence of 13.4% versus 7.5% in favour of the SGR arm. (NB: given the small sample size, the purpose of the arms is simply to monitor for unexpected, gross differences between arms)
Davis 2014	Smoking cessation, mental health	All participants read all text messages once or twice. (n=5)	66% agreed and strongly agreed they were interested in the service.		The technology was user friendly. (n=5)	All participants found the text messages useful. (n=5)			

Abroms 2015	Smoking cessation	All respondents have read all the text messages (n=16).		Received number of text messages was "just right" (n=14) or "too few" (n=2).		All respondents (n=16): "agreed" and "completely agreed" that the program was helpful in quitting.	Most participants liked the program overall.	All respondents (n=16) would recommend the program to a friend.	
Moniz 2015	Smoking cessation, nutrition								Improvements in self-reported behaviour between baseline and follow-up: decreased tobacco use in 41% of the smokers (n=44). More consistent condom use in 7% of the sexually active participants (n=83). 32% more prenatal vitamin intake. 32% more frequent seatbelt use. 41% more frequent healthy food intake.