

Supplemental - Table 5. Outcomes of mobile phone app interventions

Source (Purpose)	Main Outcomes	Other Outcomes
<p>Lopez et al. [42] (Risk behavior)</p>	<p>Non-regular sex partners, baseline (first survey) vs. 6 mon f/u (second survey), n (%):</p> <ul style="list-style-type: none"> • Men: 12/27 (44%) vs. 13/27 (48%), NS • Women: 8/31 (26%) vs. 9/31 (29%), NS <p>Condom use with non-regular partner during last sexual intercourse, baseline vs. 6 mon f/u, n (%): 7/58 (12%) vs. 6/58 (10%), NS</p> <p>Sexually transmitted disease (STD) knowledge, baseline vs. 6 mon f/u, % (n):</p> <p>A. Foul-smelling discharge is a symptom that can affect, $p = .04$:</p> <ul style="list-style-type: none"> • Both men and women: 69% (40/58) vs. 86% (50/58) • Only men or only women: 26% (15/58) vs. 9% (5/58) • Neither: 5% (3/58) vs. 5% (3/58) <p>B. Anal irritation or discharge as a symptom of STDs:</p> <ul style="list-style-type: none"> • Not true: 41% (24/58) vs. 31% (18/58), NS • True but only in men or only women: 19% (11/58) vs. 12% (7/58), NS <p>C. HIV transmission:</p> <ul style="list-style-type: none"> • Sharing food: 12% (7/58) vs. 7% (4/58), NS • Mother to newborn by breastfeeding: 19% (11/58) vs. 17% (10/58), NS 	<p>Alcohol use ≥ 1/week in 6 months, baseline vs. 6 mon f/u, % (n): 26% (15/58) vs. 31% (18/58), NS</p> <p>Psychoactive substance use ≥ 1 time, baseline vs. 6 mon f/u, % (n): 41% (24/58) vs. 38% (22/58), NS</p> <p>Number of consultations, n (%):</p> <ul style="list-style-type: none"> • 1 to 3 times: 48/58 (83%) • 4 or more: 9/58 (16%) • 29 times: 1 (2%) <p>Satisfaction with DoctorChat Mobile app:</p> <ul style="list-style-type: none"> • Overall experiences: <ul style="list-style-type: none"> o Excellent (26.8%) o Good (50.0%) o Fair (15.5%) o Bad, (7.7%) • Ease of use: <ul style="list-style-type: none"> o Easy or very easy (69.7%) o Difficult or not so easy (30.3%) • Having access to a mobile-based tele-consultation tool on sexual health to be important or very important (92.3%)
<p>Zotti et al. [46] (Oral hygiene)</p>	<p>Every 3 months, participants in both groups were examined in-person and evaluated for GI and PI scores, and number of WS</p> <p>GI, Intervention vs. Control, mean (SD):</p> <ul style="list-style-type: none"> • T0: 1.2\pm0.7 vs. 1.2\pm0.7, NS • T1: 1.1\pm0.5 vs. 1.4\pm0.6, NS • T2: 0.99\pm0.5 vs. 1.3\pm0.6, $p < .05$ • T3: 0.87\pm0.4 vs. 1.4\pm0.6, $p < .001$ • T4: 0.67\pm0.4 vs. 1.4\pm0.6, $p < .0001$ <p>PI, Intervention vs. Control, mean (SD):</p> <ul style="list-style-type: none"> • T0: 0.4\pm0.3 vs. 0.5\pm0.3, NS 	<p>No statistically significant difference observed in the frequency of new caries across intervention and control groups during study period of 12-month</p> <p>All participants in intervention group uploaded their selfies every week throughout the study</p> <p>Some participants uploaded additional content, including pictures and video tutorials related to oral hygiene and orthodontic treatment</p> <p>A community of peers sharing their experience was successfully created among the intervention participants</p>

	<ul style="list-style-type: none"> • T1: 1.7±0.4 vs. 1.7±0.3, NS • T2: 1.5±0.3 vs. 1.8±0.5, $p<.01$ • T3: 1.3±0.4 vs. 1.9±0.4, $p<.0001$ • T4: 1.1±0.5 vs. 1.8±0.5, $p<.0001$ <p>N of patients with visible WS, Intervention vs. Control:</p> <ul style="list-style-type: none"> • T0: 4 vs. 5, NS • T1: 4 vs. 6, NS • T2: 4 vs. 8, NS • T3: 5 vs. 13, $p<.05$ • T4: 7 vs. 16, $p<.05$ 	
Pretlow et al. [50] (Weight management)	<p>Change in % over-BMI:</p> <ul style="list-style-type: none"> • Weight loss average was 7.1 %over-BMI (baseline to end of study), 0.051 per day ($p<.01$) • More weight loss was seen in: males (standardized estimate = 0.71; $p<.01$), younger patients (standardized estimate = 0.42; $p=.04$) <p>Self-management/Adherence:</p> <ul style="list-style-type: none"> • Improvement in the following (baseline vs. end of the study): better control of eating ($p<.01$), higher self-esteem ($p<0.01$), and less turning to food at stress ($p<.01$) • Participants with better weight loss: <ul style="list-style-type: none"> ○ Addiction model did not affect their guilt about their weight (standardized estimate = 0.59; $p<.01$) ○ Had high program compliance as reported by their mentors (standardized estimate = 0.68; $p<.01$) ○ 48.1% indicated that calling obesity an addiction made their guilt about their weight worse, more in girls (66.7 vs. 11.1%, $p<.01$) 	<p>Usability/Acceptability:</p> <ul style="list-style-type: none"> • Average satisfaction 3.1 (5 being most helpful) • 25/27 (89%) completed the program were able to identify one or more specific problem foods • 70% completely eliminated and 30% reduced frequency of their snacking • 26/27 (96%) reduced amounts of home meals, average 51.1% less from baseline
Direito et al. [51] (Physical activity)	<p>In pre-specified per-protocol analyses with the app being used 3 times/week), Time to complete 1-mile walk/run, adjusted mean difference in seconds (95% CI):</p> <ul style="list-style-type: none"> • Non-immersive app vs. control: -79.39 (-133.01, -25.77), $p = .003$ • Immersive app vs. control: -55.29 (-111.46, 0.88), $p = .06$ <p>Intervention “immersive” vs. Control, adjusted difference (95% CI):</p> <ul style="list-style-type: none"> • Time to complete 1-mile walk/run (sec): -28.36 (-66.54, 9.82) • PAQ-A: 0.14 (-0.26, 0.54) • PACES: -0.10 (-0.33, 0.13) • PNSES: -0.08 (-0.46, 0.31) • PASES: -0.02 (-0.24, 0.19) 	<p>No adverse events were deemed related to the study intervention</p> <p>Intervention apps use:</p> <ul style="list-style-type: none"> • 2 times per week in 10/32 (31%) • 3 times per week in 10/32 (31%) • 1 time per week in 8/32 (25%) <p>No differences were evident on timing of use (i.e., weekday, weekend, morning, afternoon, evening)</p> <p>Intervention apps were used:</p> <ul style="list-style-type: none"> • Mostly outdoors (e.g., street, park vs. gym, home treadmill)

	<ul style="list-style-type: none"> • Daily time spent in sedentary activities (min): -10.94 (-69.83, 48) • Daily time spent in MVPA (min): 1.74 (-11.45, 14.93) <p>Intervention “non-immersive” vs. Control, adjusted difference (95% CI):</p> <ul style="list-style-type: none"> • Time to complete 1-mile walk/run (sec): -24.67 (-63.51, 14.18) • PAQ-A: 0.23 (-0.18, 0.64) • PACES: -0.17 (-0.40, 0.06) • PNSES: 0.01 (-0.38, 0.40) • PASES: 0.04 (-0.18, 0.26) • Daily time spent in sedentary activities (min): 3.95 (-56.26, 64.16) • Daily time spent in MVPA (min): -1.82 (-16.00, 12.36) 	<ul style="list-style-type: none"> • With friend (n=7), family (n=9), or alone (n=13) <p>The majority of participants (21/32, 66%) had no prior experience of using their smartphone for PA purposes</p> <p>Overall, 81% (26/32) were interested in trying different PA-promoting apps in the future</p>
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App: Application

BMI: Body mass index;

GI: Gingival index

MVPA: moderate-to-vigorous physical activity

PACES: Physical Activity Enjoyment Scale

PAQ-A: Physical Activity Questionnaire for Adolescents

PASES: Physical Activity Self-Efficacy Scale

PI: Plaque index

PNSES: Psychological Need Satisfaction in Exercise Scale

SD: Standard deviation

SOC: Standard of care

WS: White spots

GI measurement score (0-3): 0 being normal gingiva and 3 having severe inflammation and edema, with spontaneous bleeding

PI measurement score (0-3): 0 being best with no plaques and 3 having plaque covering more than half of the surface

WS measurement score: (0-3): 0 being no visible white spots, and 3 having visible white spots requiring restoration