Supplementary material

Description of moderator analysis in random effects model

A random effects model generates information about the extent to which moderators influence the true effect sizes[1], and the extent to which moderator variables explain variation between studies and thus account for heterogeneity in the overall effect size. For categorical moderators, studies are categorised based on a particular characteristic (i.e. type of new-media), and all effect sizes falling in to a particular category are analysed together. If the effect size for a category of effects is significant, and is homogenous, this characteristic is said to account for heterogeneity in the overall effect size, i.e., it explains why there are discrepancies in the size of effects included in the meta-analysis.

Description of publication bias using the Fail Safe N and Duval and Tweedie's Trim and Fill

Publication bias refers to the phenomenon that non-significant studies may be missing from the analysis because they are not published. The Fail-safe N procedure estimates the number of studies with non-significant effects that would need to be included in the analysis to nullify the observed effect. A larger Fail-safe N is desirable[2].

Duval and Tweedie's The Trim and Fill method accounts for 'small study' effects[3]. Small study bias refers to the tendency for studies with small sample sizes but significant results to be included in published data sets, whereas studies with small sample sizes and null effects are less likely to be published. The inclusion of studies with small sample sizes and disproportionately large effects that are not

evenly distributed around the observed effect size may skew the effect size. The Trim and Fill method removes these small studies and 'fills' the distribution with hypothetical studies to revolve the uneven distribution. To the extent that the averaged corrected effect size remains unchanged after the application of the Trim and Fill, evidence exists that the sample of studies is unaffected by the small-study bias[4].

1. Hunter JE, Schmidt FL. Fixed Effects vs. Random Effects Meta‐Analysis Models: Implications for Cumulative Research Knowledge. International Journal of Selection and Assessment 2000;**8**(4):275-92 doi: 10.1111/1468-2389.00156.

2. Rosenberg MS. The file-drawer problem revisited: A general weighted method for calculating fail-safe numbers in meta-analysis. Evolution 2005;59(2):464-68 doi: 10.1111/j.0014-3820.2005.tb01004.x.

3. Duval S, Tweedie R. Trim and Fill: A Simple Funnel Plot–Based Method of Testing and Adjusting for Publication Bias in Meta-Analysis. Biometrics 2000;56(2):455-63 doi: 10.1111/j.0006-341X.2000.00455.x.

4. Egger M, Smith GD, Schneider M, et al. Bias in meta-analysis detected by a simple, graphical test. British Medical Journal 1997;315:629-34 doi: 10.1136/bmj.315.7109.629.

Table 1 List of search terms included in search strategy

Topic	Database	Subject Headings	Keywords
Technology	Medline	Explode "internet"/all subheadings Explode telecommunications/ Electronic email, Computers, handheld. Explode Cellular phone/ all subheadings	Internet Web-base* Online Internet-based* Social Media Telemedicine Blogging "Social Networking Sites" SNS eHealth "digital media" Gaming "online Gaming" "mobile phone" "cell* phone" "short messaging service" SMS "text message" "mobile cell phone" MCP iPhone Android "smart phone" "phone application"

			app "phone app" Facebook Twitter Myspace
PsychINFO	Explode "internet"/all subheadings Explode electronic communication / all subheadings Cellular phones Information technology Websites Technology Innovation		
EMBASE	Internet Mobile Phone e-mail Text messaging Social Media Webcast Internet		
Global Health	Explode "internet"/all subheadings Explode computer / all subheadings Mobile telephones Information technology Technology Innovation		
Sexual	Medline	Reproductive	"Reproductive health"

Health		Health	"sex* health"
		Safe Sex	"sex education"
		Unsafe sex	"sex ed"
		Sex Education	"screen* adj2 sex*"
		Health behavior	"test* adj2 sex*"
		Condoms	Safe sex
		Contraception	unsafe sex
		Sexually transmitted disease	protected sex
			unprotected sex
		contraception barrier	Condom* adj2 use
		contraceptive devices, male.	Male contraceptive device
		contraception behavior	Contraception
			Prophalactic
			STD
			STI
			Sexually transmitted disease
			Sexually transmitted infection
PsychINFO	Psychosexual behaviour		
	Sex education		
	Safe sex		
	sexual risk taking		
	Condoms		
	Sexually transmitted disease		
	AIDS prevention		
EMBASE	Sexual health		
	Safe Sex		
	Unsafe sex explode/all		

	subheadings		
	Condom Use sexually transmitted disease contraception sexual education		
Global Health	Sexual health Sex education Safer sex sexual risk taking Condoms Sexually transmitted disease		
Intervention Studies.	Medline	Intervention Studies	Intervention Program Study Effect Service Trial
PsycINFO	Intervention Studies Experimentation		
EMBASE	Intervention Studies Experiments		
Global Helath	Intervention studies Experimental study		