GSS 2016: Social Media Usage module

Blinded for peer review

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Contents

Note: The goal of this supplementary document is to exactly reproduce the results, figures, and tables reported in the manuscript through the underlying R code and to generate additional plots that do not appear in the manuscript. The document is therefore structured parallel to the manuscript.

1. Introduction

2. Method

A total of $N = 1372$ respondents reported on their social media use, and on average, they were $M = 42.94$, $SD = 16.00$ years old and 56% of them were women. Most participants (69%) were Non-Hispanic White, 14% were Non-Hispanic Black, 13% identified as Hispanic, and 5% reported another race.

87 participants gave impossible values for the year that they had started to use the internet (i.e., before 1991) and 101 gave impossible values for the year that they had started to use social media platforms (e.g., saying that Instagram had been their first social media platform and that they started in 2006, even though Instagram did not launch until 2010). These values were subsequently set to missing.

One more question asked participants to rate their satisfaction with their financial situation. Although this index of course was associated with income, the correlation was not strong enough to see financial satisfaction as a mere proxy for income, $r = 0.35$.

CES-D, Cronbach's $\alpha = 0.76$

Social trust, Cronbach's $\alpha = 0.65$

Social confidence, Cronbach's $\alpha = 0.78$

[referring to the item on mental breakdown:] In fact, this item showed only low-to-medium correlations with all other indicators of well-being in the survey, r = -0.14 with happiness, r = -0.17 with health, r = 0.31 with depression, and r = 0.25 with bad mental health days.

In fact, the number of bad mental health days seemed more closely related to self-rated physical health, r = -0.32, than to happiness, r = -0.27.

Table 1: Supplementary Table 1: Sample sizes per variable

Variable	n
Bad mental health days	800
Confidence in soc. institutions	1372
Depression	680
Ever breakdown	805
Exciting vs. dull life	684
Financial satisfaction	1368
Happiness	1370
Health	686
Relationship satisfaction	728
Social trust	1370

3. Results and Discussion

3.1 The Demography of Social Media Users

3.1.1 Prevalence

Social media use was highly prevalent in the 2016 GSS data and only 11% were not on social media (numbers are adjusted for design and non-response weights; estimates may not sum up to 100 due to rounding). Typically, respondents used between 1 and 5 different platforms. However, a minority of respondents reported using 6 platforms or more. We termed this group of respondents *intensive social media users* (6+ platforms; 11%)) and used regression to evaluate which socio-demographic characteristics differentiate them from both *moderate users* (1-5 platforms; 79%) and *non-users* (0 platforms; 11%)).

3.1.2 General characteristics

Table 1

Controlling for all other demographic variables: social media users in general tended to be younger than non-users, and intensive social media users were again younger than moderate users, OR = 0.53 95% CI [0.41, 0.67] *** (see Figure 1 for distributions; see Supplementary Material for full regression table). Social media users in general were also substantially more likely to be female than non-users, and intensive social media users were more likely to be female than everyone else, OR = 1.63 95% CI [1.09, 2.43]. To illustrate, women made up 63% of intensive users in this sample, but only 57% of moderate users and 40% of non-users.

Regarding race and ethnicity, Hispanic participants were tendentially less likely to be intensive users, but only the contrast with Non-Hispanic Black participants reached significance, OR = 0.63 95% CI [0.38, 1.05]. People with high socio-economic status, OR = 1.56 95% CI [1.27, 1.92] , more foreign-born family members, OR = 1.26 95% CI [1.01, 1.58] , and higher religiosity, OR = 1.29 95% CI [1.06, 1.57] , were all more likely to be intensive social media users.

Finally and as expected, intensive social media users had started using social media earlier both in absolute terms (year of start), $t(62)$ = -4.23, $p < .001$, and in relative terms (proportion of life using social media), $t(62)$ = 5.33, $p < .001$, compared to their more moderately-using counterparts. They also reported using the

Table 2: Table 1: Regressions of demographic predictors on intensive usage (logistic regression for binary outcome, linear regression for continuous number of platforms). Continuous predictors are centered and standardized, the original standard deviations are presented in the right-hand column.

	Intensive user (binary)		Number of platforms		
Predictor	OR	CI	b	CI	SD
Intercept	0.10	[0.07, 0.13] ***	2.98	[2.84, 3.13] ***	
City size (std.)	1.16	[0.95, 1.43]	0.15	[0.02, 0.28] *	42835.27
Household size (std.)	0.92	[0.74, 1.13]	-0.08	[-0.21, 0.04]	1.35
Gender: Male	0.61	[0.41, 0.91] *	-0.70	[-0.91, -0.48] ***	0.50
Age (std.)	0.53	[0.41, 0.67] ***	-0.74	[-0.86, -0.61] ***	16.02
Nr of children (std.)	0.91	[0.74, 1.12]	-0.09	[-0.23, 0.05]	1.48
Race/Ethn.: Hispanic	0.54	[0.25, 1.16]	-0.41	[-0.77, -0.04] *	0.32
Race/Ethn.: Non-Hispanic Black	1.59	[0.95, 2.64]	0.07	[-0.31, 0.45]	0.35
Race/Ethn.: Non-Hispanic Other	0.90	[0.35, 2.27]	0.16	[-0.50, 0.82]	0.21
SES index (std.)	1.56	[1.27, 1.92] ***	0.23	[0.11, 0.35] ***	0.60
Foreign family index (std.)	1.26	[1.01, 1.58] *	0.17	[-0.02, 0.35]	0.87
Religiosity index (std.)	1.29	[1.06, 1.57] *	0.15	[0.04, 0.26] *	0.84
Political conservatism index (std.)	0.86	[0.68, 1.07]	-0.08	[-0.20, 0.04]	0.87

internet for almost an hour longer on both weekdays, $t(62) = 3.74$, $p < .001$, and weekend days, $t(62) = 3.34$, $p = 0.001$, than either non-users or moderate users.

Results were similar when using the continuous number of used platforms as an outcome instead of classifying users as intensive versus not (see Supplemental Materials).

Without controlling for the other demographic variables: Social media users in general tended to be younger than non-users, and intensive social media users were again younger than moderate users, $t(63) = -5.25$, $p < .001$ (for the comparison of intensive users versus everyone else; see Figure 1 for all patterns of means; see Supplementary Material for a table of t-tests). Social media users in general were also substantially more likely to be female than non-users, and intensive social media users were marginally more likely to be female than everyone else, $t(63) = -1.87$, $p = 0.066$. Intensive social media users were more likely to identify as Non-Hispanic Black, $t(63) = 2.62$, $p = 0.011$, and correspondingly marginally less likely to identify as Non-Hispanic White, $t(63) = -1.91$, $p = 0.060$. Further, intensive users were significantly more likely to live in a larger city than either non-users or moderate users, $t(63) = 2.34$, $p = 0.023$. Intensive social media users scored higher on several measures of SES. They assigned themselves higher ranks in society, $t(63) = 2.39$, $p = 0.020$, reported higher incomes, $t(63) = 2.26$, $p = 0.027$, held marginally more prestigious occupations, $t(62) = 1.98$, $p = 0.052$, and were substantially more likely to hold a degree from a 4-year college, $t(63) = 4.02$, $p < .001$. Despite slight visual trends in the means, there were no significant differences for employment status, $t(63) = 1.65$, $p = 0.103$, or full-time employment, $t(63) = 0.57$, $p = 0.568$. Intensive users did not differ significantly from non-users and moderate users on religious or political characteristics, although the patterns of means showed trends towards more participation in religious services ($t(63) = 1.68$, $p = 0.099$) and events ($t(63) = 1.76$, $p = 0.083$) and towards a higher chance of having voted (or intended to vote) for Obama in 2012, $t(63) = 1.87$, $p = 0.067$. Finally and as expected, intensive social media users had started using social media earlier both in absolute terms (year of start), $t(62) = -4.23$, $p < .001$, and in relative terms (proportion of life using social media), $t(62) = 5.33$, $p < .001$, compared to their more moderately-using counterparts. They also reported using the internet for almost an hour longer on both weekdays, $t(62) = 3.74$, $p < .001$, and weekend days, $t(62) = 3.34$, $p = 0.001$, than either non-users or moderate users.

Table 3: Supplementary Table 2: T-tests of intensive vs. both moderate and non-users. Only tests with p < .10 are shown.

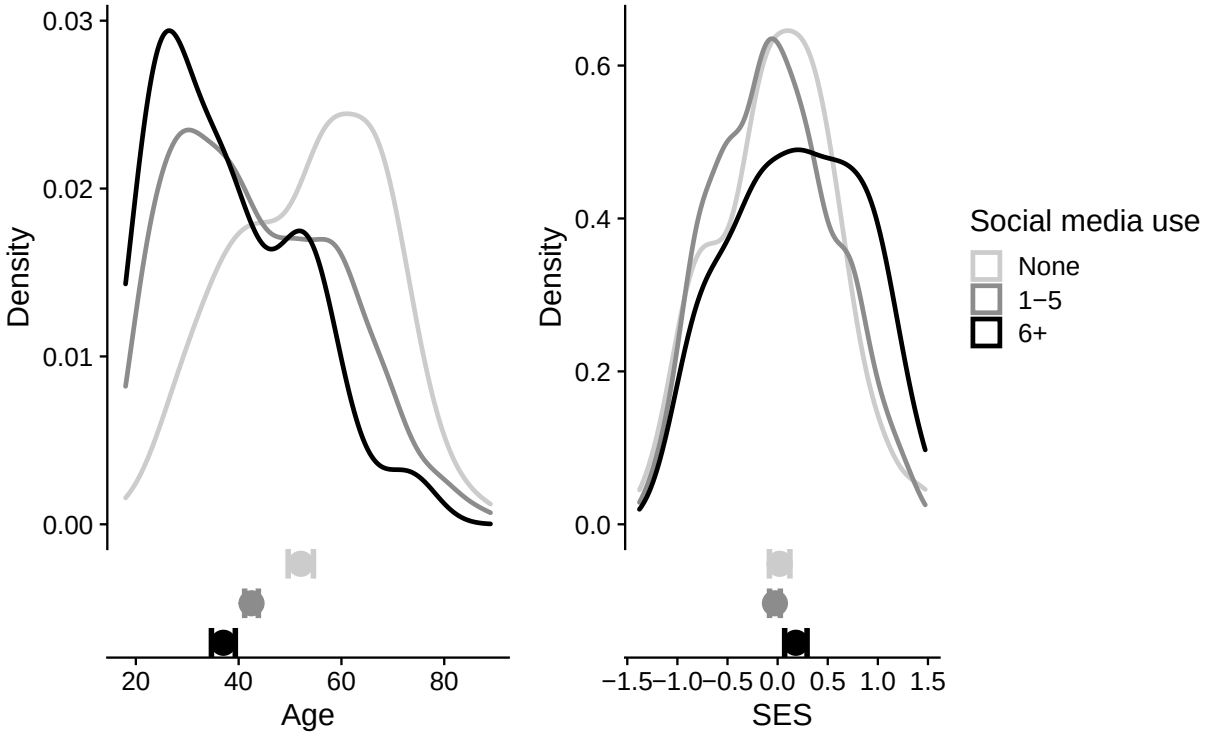
Variable	t	df	p
City Size	2.34	63	0.023
Gender: Male	-1.87	63	0.066
Age	-5.25	63	0.000
Nr of Children	-3.33	63	0.001
Non-Hispanic White	-1.91	63	0.060
Non-Hispanic Black	2.62	63	0.011
Social Rank	2.39	63	0.020
Income	2.26	63	0.027
Occupational Prestige	1.98	62	0.052
College Degree	4.02	63	0.000
Religious Service Attendance	1.68	63	0.099
Religious Events Attendance	1.76	63	0.083
Vote for Obama in 2012	1.87	63	0.067
Foreign-Born Parent	1.97	63	0.053
Nr of Foreign-Born Grandparents	1.70	63	0.094
Social Media Start Date	-4.23	62	0.000
Social Media Proportion of Life	5.33	62	0.000
Internet Use Weekday (h)	3.74	62	0.000
Internet Use Weekend Day (h)	3.34	62	0.001
SES index	3.52	63	0.001
Foreign family index	1.79	63	0.078
Religiosity index	1.80	63	0.077
Political conservatism index	-2.23	63	0.029

Table 4: Supplementary Table 3: Means, CIs, and sample sizes of demographic variables

	None			1-5			6+		
Variable	M	CI	n	M	CI	n	M	CI	n
Age	52.09	[49.63, 54.55]	149	42.51	[41.18, 43.84]	1073	37.03	[34.7, 39.36]	144
Nr of Children	1.74	[1.36, 2.12]	148	1.53	[1.42, 1.64]	1076	1.16	[0.92, 1.4]	144
Foreign family index	0.00	[-0.18, 0.17]	150	-0.01	[-0.07, 0.06]	1078	0.16	[-0.03, 0.35]	144
Household Size	2.68	[2.33, 3.02]	150	2.81	[2.7, 2.93]	1078	2.85	[2.62, 3.07]	144
Internet Use Weekday (h)	1.72	[0.19, 3.25]	6	3.01	[2.78, 3.25]	1074	4.06	[3.54, 4.57]	144
Internet Use Weekend Day (h)	1.30	[0, 2.61]	6	2.80	[2.54, 3.06]	1074	3.95	[3.26, 4.65]	144
Gender: Male	0.60	[0.53, 0.68]	150	0.43	[0.39, 0.46]	1078	0.37	[0.29, 0.45]	144
Political conservatism index	0.07	[-0.08, 0.23]	147	0.05	[-0.02, 0.12]	1065	-0.13	[-0.28, 0.01]	144
Hispanic	0.13	[0.07, 0.19]	150	0.13	[0.1, 0.16]	1077	0.09	[0.04, 0.14]	144
Non-Hispanic Black	0.12	[0.07, 0.18]	150	0.13	[0.1, 0.15]	1078	0.23	[0.15, 0.31]	144
Non-Hispanic White	0.73	[0.65, 0.81]	150	0.70	[0.66, 0.73]	1078	0.60	[0.5, 0.7]	144
Religiosity index	-0.12	[-0.29, 0.05]	150	-0.05	[-0.1, 0.01]	1076	0.09	[-0.08, 0.26]	144
SES index	0.02	[-0.08, 0.12]	150	-0.03	[-0.08, 0.03]	1078	0.18	[0.07, 0.29]	144
City Size	44093.28	[36219.05, 51967.5]	150	44618.15	[39700.64, 49535.67]	1078	55195.92	[44984.21, 65407.63]	144
Social Media Start Date				2009.86	[2009.58, 2010.14]	894	2008.51	[2007.96, 2009.06]	118
Social Media Proportion of Life				0.17	[0.16, 0.18]	890	0.24	[0.21, 0.26]	118

Figure 1

\begin{figure}



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\caption{Figure 1. Weighted density curves, means, and 95% CI error bars of age and SES by social media use.} \end{figure}

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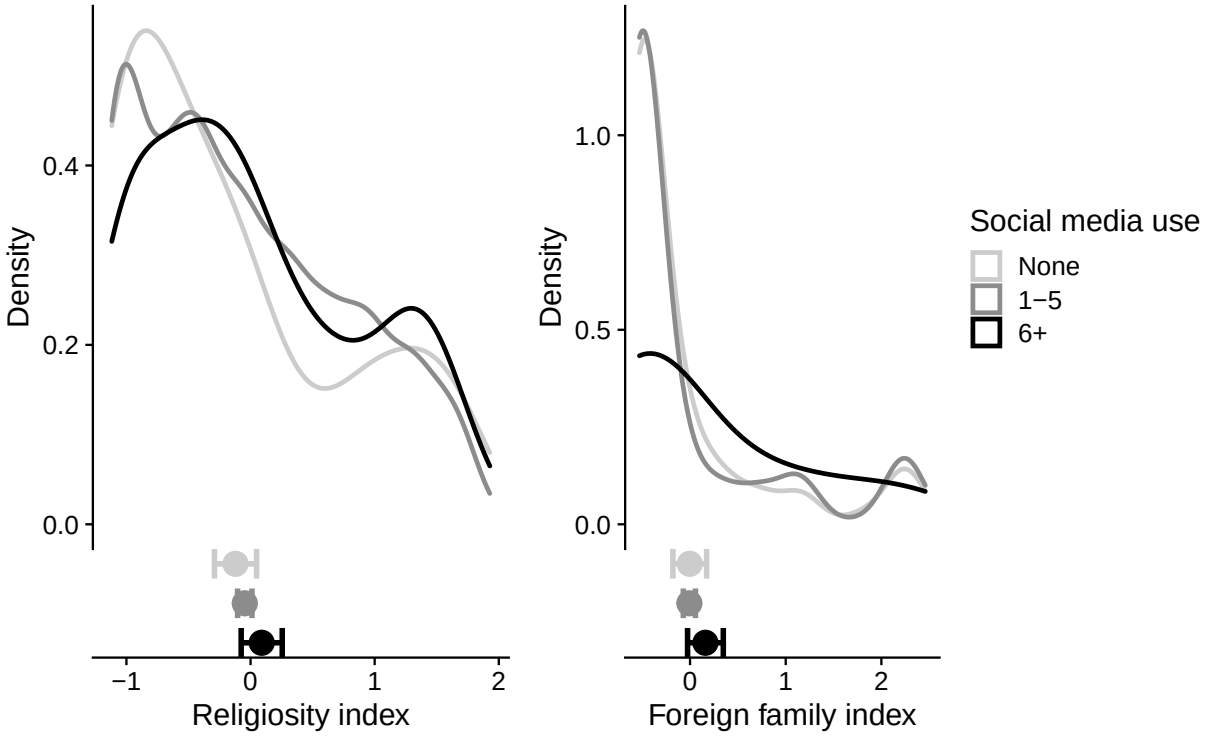

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\caption{Supplementary Figure 1. Weighted density curves, means, and 95% CI error bars of the religiosity and foreign-family indices by social media use.} \end{figure}

3.2 Multi-Platform Social Media Use and Well-Being

Table 2

Table 5: Table 2. Correlations of Social Contact and Well-Being

Outcome	Online social contact	Offline social contact
Happiness	0.01 [-0.04, 0.06]	0.03 [-0.01, 0.08]
Health	0.02 [-0.05, 0.09]	0.06 [-0.02, 0.12]
Depression	0.04 [-0.03, 0.11]	\+
Bad mental health days	0.07 [-0.01, 0.15]	0.07 [-0.03, 0.16]
Ever breakdown	0.13* [0.06, 0.20]	0.03 [-0.07, 0.13]
Exciting vs. dull life	0.08* [0.01, 0.15]	0.13* [0.06, 0.19]
Financial satisfaction	-0.01 [-0.07, 0.04]	-0.02 [-0.06, 0.03]
Relationship satisfaction	0.06 [-0.00, 0.11]	0.05 [-0.01, 0.11]
Social trust	-0.01 [-0.06, 0.04]	-0.12* [-0.18, -0.06]
Confidence in soc. institutions	0.06* [0.00, 0.11]	0.06 [0.00, 0.12]
Offline social contact	0.13* [0.05, 0.20]	

* $p < .05$

\+ could not be calculated because the variables were never administered in the same questionnaire

Table 6: Supplementary Table 4: Weighted linear regressions with standardized outcomes (SEs in parentheses, * = p < .05)

Predictor	Outcome Variable									
	Happiness	Health	Depression	Bad mental health days	Ever break-down	Exciting vs. dull life	Financial satisfac-tion	Relationship satisfac-tion	Social trust	Confidence in soc. in-stitutions
Intercept	0.11	-0.01	-0.01	0.02	0.02	-0.16	0.10	-0.18	0.05	0.01
	(0.07)	(0.09)	(0.09)	(0.09)	(0.08)	(0.09)	(0.07)	(0.09)	(0.05)	(0.06)
# Social media platforms	-0.00	-0.02	0.03	0.03	0.04	0.02	-0.01	0.04	0.03	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02) *	(0.01) *	(0.01)
City size (std.)	0.03	-0.05	0.02	0.06	0.05	0.02	-0.02	-0.09	0.02	0.07
	(0.03)	(0.04)	(0.05)	(0.04)	(0.03)	(0.04)	(0.03)	(0.04) *	(0.03)	(0.02) **
Household size (std.)	0.04	-0.00	-0.08	0.03	0.05	0.04	0.03	0.01	0.06	0.02
	(0.03)	(0.06)	(0.05)	(0.06)	(0.04)	(0.05)	(0.03)	(0.06)	(0.03)	(0.03)
Gender: Male	-0.08	-0.09	-0.09	-0.13	-0.24	0.07	0.03	0.20	0.05	-0.04
	(0.07)	(0.09)	(0.08)	(0.08)	(0.08) **	(0.08)	(0.06)	(0.09) *	(0.05)	(0.06)
Age (std.)	0.06	0.00	-0.16	-0.10	-0.23	0.07	0.11	0.09	0.36	0.00
	(0.04)	(0.07)	(0.06) **	(0.05)	(0.05) ***	(0.05)	(0.04) *	(0.05)	(0.04) ***	(0.03)
Nr of children (std.)	-0.06	-0.10	0.25	0.07	0.04	-0.11	-0.16	-0.26	-0.09	0.02
	(0.04)	(0.07)	(0.06) ***	(0.06)	(0.05)	(0.06)	(0.03) ***	(0.06) ***	(0.04) *	(0.04)
Race/Ethn.: Hispanic	0.04	0.30	-0.17	-0.07	-0.11	0.16	-0.10	-0.12	-0.12	-0.13
	(0.10)	(0.16)	(0.15)	(0.15)	(0.15)	(0.14)	(0.13)	(0.14)	(0.11)	(0.12)
Race/Ethn.: Non-Hispanic Black	-0.24	0.22	-0.07	-0.31	-0.53	0.23	-0.21	-0.34	-0.36	-0.02
	(0.08) **	(0.14)	(0.13)	(0.11) **	(0.11) ***	(0.12)	(0.09) *	(0.16) *	(0.08) ***	(0.09)
Race/Ethn.: Non-Hispanic Other	0.00	-0.07	0.01	-0.28	-0.11	0.11	-0.04	0.05	-0.22	0.22
	(0.14)	(0.21)	(0.22)	(0.11) *	(0.17)	(0.19)	(0.16)	(0.16)	(0.15)	(0.13)
SES index (std.)	0.24	0.30	-0.24	-0.13	-0.10	0.24	0.29	-0.03	0.23	0.07
	(0.03) ***	(0.04) ***	(0.04) ***	(0.04) **	(0.04) **	(0.04) ***	(0.03) ***	(0.04)	(0.03) ***	(0.02) **
Foreign family index (std.)	-0.03	0.04	0.01	-0.01	-0.07	0.03	0.01	0.03	-0.02	0.12
	(0.03)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)	(0.03)	(0.03) ***
Religiosity index (std.)	0.07	0.01	-0.14	-0.07	-0.04	0.21	0.05	0.09	0.08	0.06
	(0.03) *	(0.05)	(0.04) ***	(0.04)	(0.04)	(0.04) ***	(0.04)	(0.04) *	(0.03) **	(0.03)
Political conservatism index (std.)	0.04	0.05	-0.08	-0.04	-0.01	-0.02	0.02	0.04	-0.12	-0.10
	(0.04)	(0.04)	(0.03) *	(0.05)	(0.04)	(0.04)	(0.03)	(0.03)	(0.03) ***	(0.03) ***

Table 7: Supplementary Table 5: Average values of finding life exciting (vs. dull)

Social media use	M	CI
None	0.51	[0.37, 0.64]
1-5	0.47	[0.41, 0.53]
6+	0.63	[0.50, 0.76]

Additionally, the previously discussed positive finding of social media users considering life more exciting than non-users (M = 0.51, 95% CI [0.37, 0.64]) appeared to be driven by intensive (M = 0.63, 95% CI [0.50, 0.76]), but not moderate users (M = 0.47, 95% CI [0.41, 0.53]).

3.3 Multi-Platform Social Media Use and Well-Being Across Age

Table 8: Supplementary Table 6: Weighted linear regressions with predictors and outcomes both standardized

	# Social media platforms			Age			Interaction		
Outcome	Beta	SE	p	Beta	SE	p	Beta	SE	p
Happiness	0.03	0.03	0.321	0.09	0.03	0.006*	-0.002	0.03	0.959
Health	0.03	0.04	0.567	0.00	0.05	0.965	0.026	0.06	0.676
Depression	0.04	0.04	0.299	-0.07	0.04	0.108	0.100	0.04	0.016*
Bad mental health days	0.02	0.04	0.558	-0.09	0.04	0.012*	-0.020	0.04	0.614
Ever breakdown	0.10	0.04	0.017*	-0.21	0.04	0.000*	0.057	0.04	0.157
Exciting vs. dull life	0.10	0.04	0.020*	0.05	0.04	0.210	0.020	0.04	0.624
Financial satisfaction	0.00	0.04	0.994	0.10	0.04	0.008*	-0.034	0.03	0.313
Relationship satisfaction	0.06	0.04	0.116	0.05	0.04	0.210	-0.052	0.04	0.237
Social trust	0.12	0.03	0.000*	0.36	0.03	0.000*	0.059	0.03	0.035*
Confidence in soc. institutions	0.06	0.03	0.022*	0.00	0.03	0.882	0.008	0.03	0.800

Out of the ten well-being variables we examined, there were eight for which social media use intensity was unrelated to well-being in interaction with age (ps = 0.157 - 0.959). One of these variables for which we found no such interaction (β = 0.06, SE = 0.04, p = 0.157) was whether respondents had ever felt like they were going to have a mental breakdown

Figure 2

Exploring the Age x Depression interaction:

Or, plotting the interaction the other way around:

For depression, middle-aged to older adults (top three quartiles of age, everyone over 34) report slightly higher depression with higher social media use, r = 0.09, p = 0.040, but for younger adults (lowest quartile, 34 and younger), depression and social media use were unrelated, r = -0.08, p = 0.200 (Figure 2; interaction β = 0.10, SE = 0.04, p = 0.016)

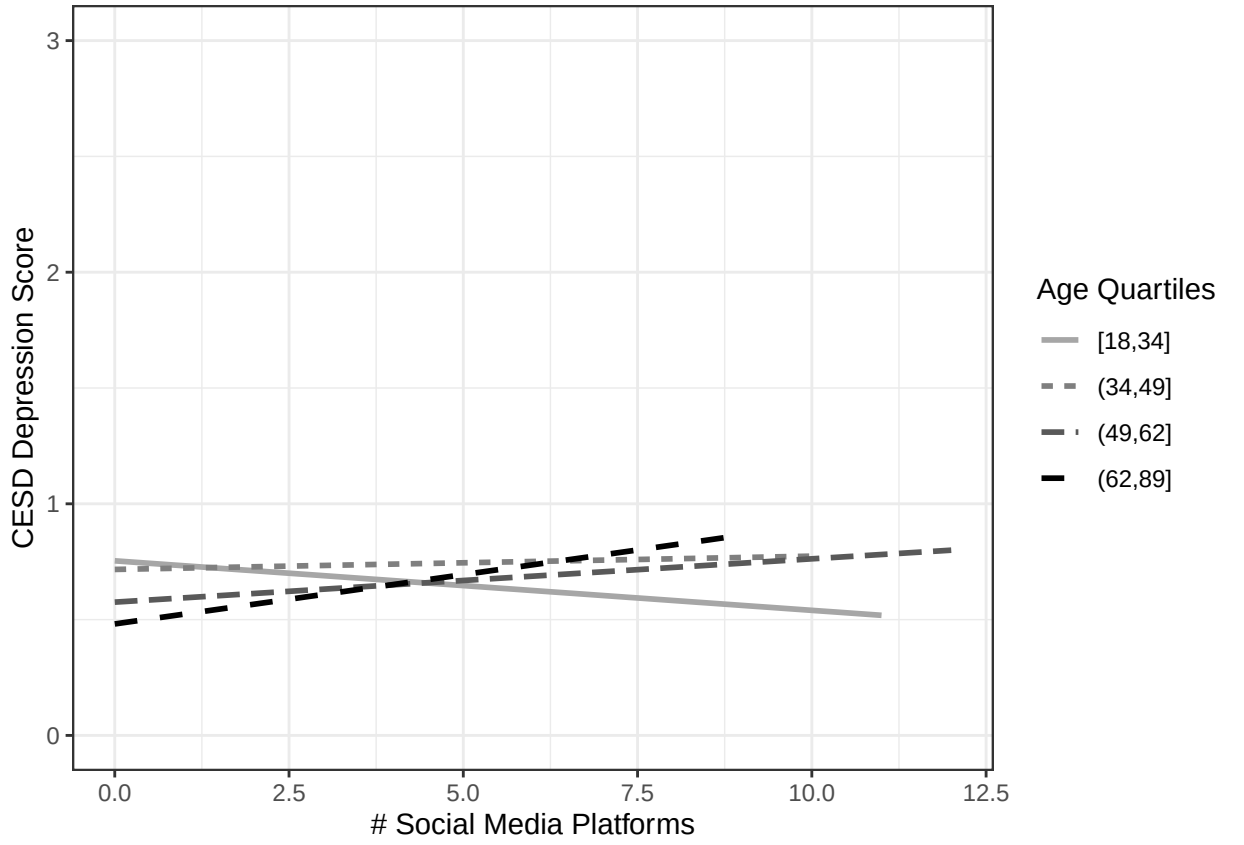

Figure 1: Figure 2. Linear regression lines for the interaction of social media usage intensity and age on symptoms of depression, plotted by age quartiles.

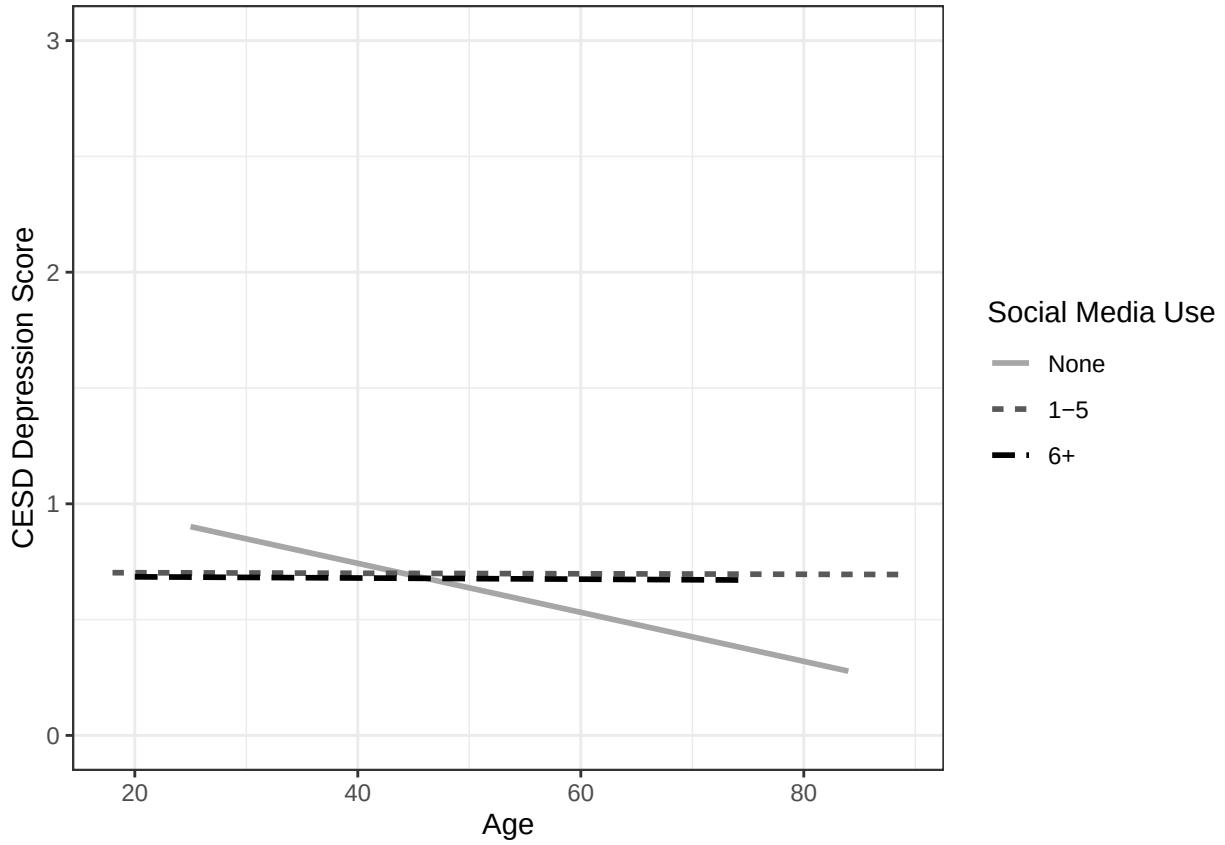

Figure 2: Supplementary Figure 2. Linear regression lines for the interaction of social media usage intensity and age on symptoms of depression, plotted by social media usage intensity.

Exploring the Age x Social Trust interaction:

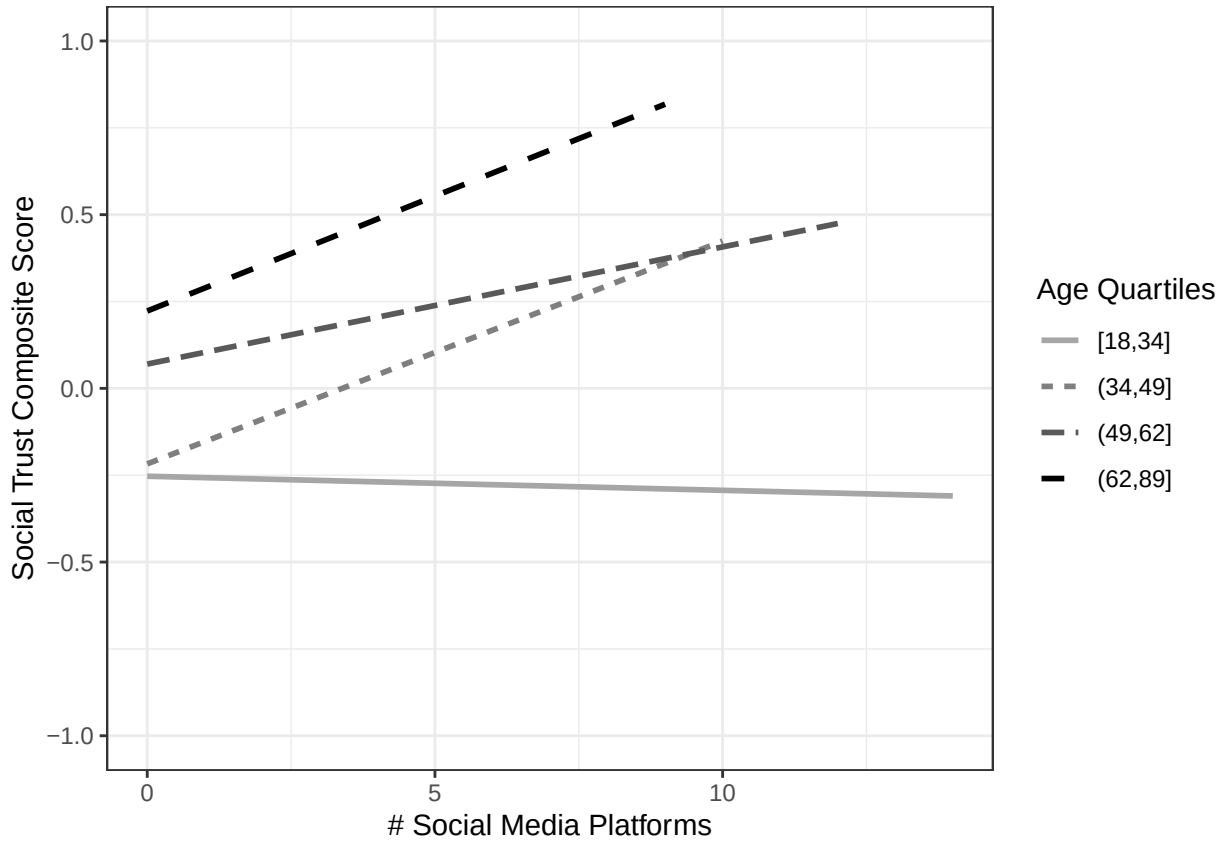

Figure 3: Supplementary Figure 3a. Linear regression lines for the interaction of social media usage intensity and age on social trust, plotted by age quartiles.

In addition, for social trust, the top three age quartiles (>34) report higher social trust with higher social media use $r = 0.09$, $p = 0.002$, but young adults do not, r = -0.01, $p = 0.760$ (interaction $\beta = 0.06$, $SE = 0.03$, $p = 0.035$).

Three more variables showed no interaction between age and social media use, but were predicted by a main effect of social media use after controlling for mean-centered age: These included ever having felt like one would have a breakdown (the same negative association as in the bivariate results; $\beta = 0.10$, $SE = 0.04$, $p = 0.017$, finding one's life exciting (the same positive association as in the bivariate results; $\beta = 0.10$, $SE = 0.04$, $p = 0.020$), and confidence in social institutions (positive association with social media use; $\beta = 0.06$, $SE = 0.03$, $p = 0.022$).

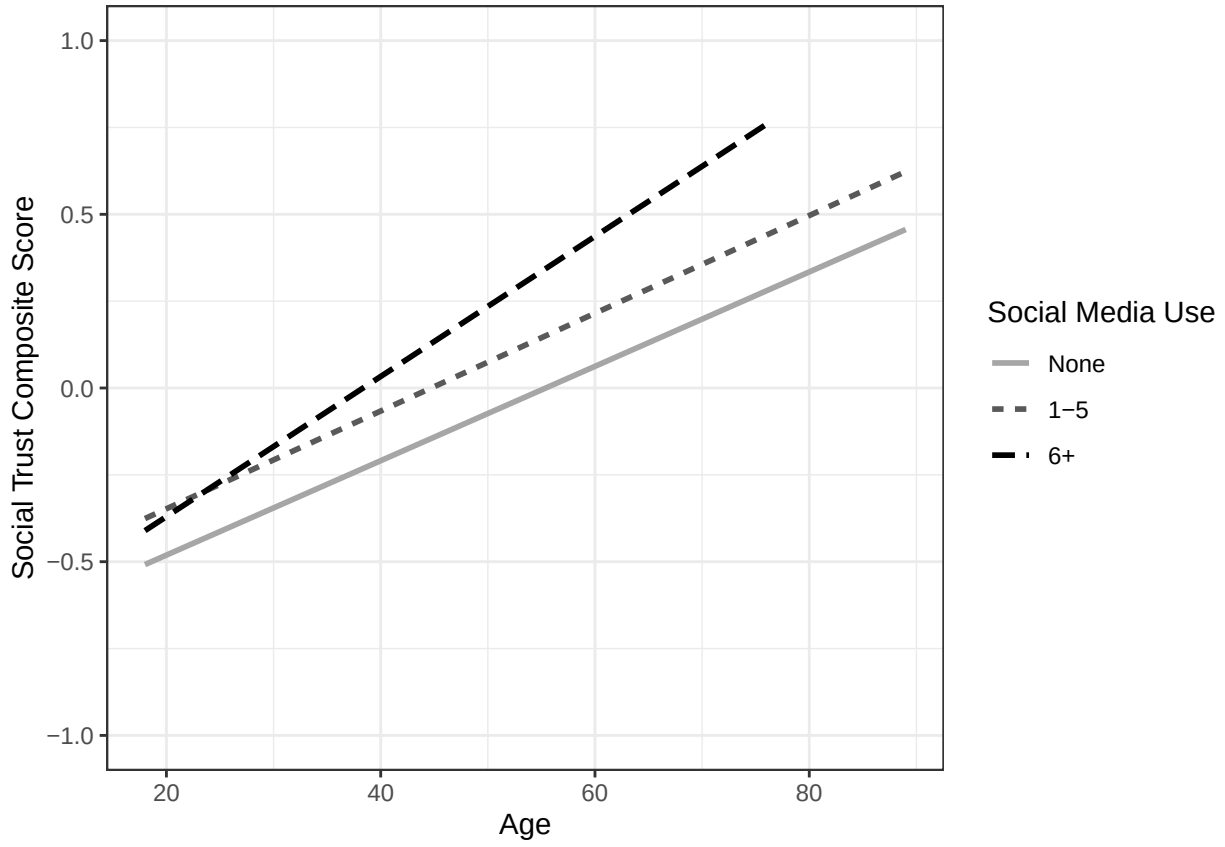

Figure 4: Supplementary Figure 3b. Linear regression lines for the interaction of social media usage intensity and age on social trust, plotted by social media usage intensity.

3.4 Specific platform use

Table 3

Table 9: Table 3. Standardized linear regression coefficients for predicting well-being from use of social media platforms, controlling for age (the effect of age is shown separately in the second column). Only beta coefficients significant at $p < .05$ are shown (see Supplementary Table 7 for the full table with all coefficients.

Social Media Platform	r with age	Happiness	Health	Depression	Bad mental health days	Ever breakdown	Exciting vs. dull life	Financial satisfaction	Relationship satisfaction	Social trust	Confidence in soc. institutions	Offline social contacts
# platforms	-0.30						0.05			0.04	0.03	
Facebook	-0.16		-0.21			0.27						
Twitter	-0.22					-0.22	0.18	0.22		0.23	0.22	
Tumblr	-0.11	-0.40	-0.76								-0.27	
Snapchat	-0.42				-0.17							0.35
Vine	-0.14											
Instagram	-0.38											
Pinterest	-0.03 (ns)	0.13				0.31	0.16					-0.19
Flickr	0.06 (ns)											
WhatsApp	-0.09		0.35				0.29					
Classmates	0.16											-0.34
LinkedIn	0.00 (ns)	0.20	0.40	-0.24			0.23	0.19		0.37		
Google+	-0.02 (ns)										0.14	

Or with all coefficients shown:

Table 10: Supplementary Table 7. Standardized linear regression coefficients for predicting well-being from use of social media platforms, controlling for age (the effect of age is shown separately in the second column). P-values shown in parentheses, * = p < .05.

Social Media Platform	r with age	Happiness	Health	Depression	Bad mental health days	Ever breakdown	Exciting vs. dull life	Financial satisfaction	Relationship satisfaction	Social trust	Confidence in soc. institutions	Offline social contacts
# platforms	-0.30 (0.000) *	0.02 (0.287)	0.01 (0.647)	0.01 (0.622)	0.02 (0.406)	0.03 (0.061)	0.05 (0.023) *	0.01 (0.627)	0.03 (0.050)	0.04 (0.001) *	0.03 (0.034) *	0.01 (0.563)
Facebook	-0.16 (0.000) *	0.01 (0.829)	-0.21 (0.039) *	0.11 (0.230)	0.12 (0.117)	0.27 (0.002) *	-0.08 (0.331)	-0.14 (0.050)	0.08 (0.341)	0.09 (0.173)	0.11 (0.068)	-0.00 (0.991)
Twitter	-0.22 (0.000) *	0.05 (0.456)	0.12 (0.299)	-0.07 (0.443)	-0.02 (0.837)	-0.22 (0.049) *	0.18 (0.042) *	0.22 (0.017) *	0.12 (0.303)	0.23 (0.008) *	0.22 (0.003) *	-0.01 (0.969)
Tumblr	-0.11 (0.000) *	-0.40 (0.001) *	-0.76 (0.000) *	0.33 (0.095)	0.15 (0.312)	0.24 (0.222)	-0.26 (0.179)	-0.23 (0.069)	-0.07 (0.697)	-0.03 (0.799)	-0.27 (0.012) *	0.19 (0.372)
Snapchat	-0.42 (0.000) *	0.10 (0.084)	0.02 (0.843)	-0.01 (0.927)	-0.17 (0.045) *	0.04 (0.744)	0.16 (0.184)	0.12 (0.216)	0.16 (0.126)	-0.01 (0.870)	0.06 (0.453)	0.35 (0.004) *
Vine	-0.14 (0.000) *	0.04 (0.748)	-0.16 (0.387)	0.05 (0.741)	-0.08 (0.548)	-0.10 (0.583)	-0.07 (0.699)	0.12 (0.425)	0.22 (0.164)	-0.11 (0.333)	0.19 (0.190)	0.15 (0.505)
Instagram	-0.38 (0.000) *	0.02 (0.784)	-0.06 (0.527)	0.11 (0.244)	0.08 (0.387)	0.04 (0.656)	0.04 (0.723)	0.04 (0.547)	0.12 (0.175)	0.03 (0.615)	0.03 (0.636)	0.20 (0.076)
Pinterest	-0.03 (0.178)	0.13 (0.016) *	0.04 (0.570)	0.01 (0.913)	0.07 (0.367)	0.31 (0.000) *	0.16 (0.044) *	-0.02 (0.787)	0.02 (0.864)	0.07 (0.240)	-0.01 (0.910)	-0.19 (0.034) *
Flickr	0.06 (0.082)	0.25 (0.132)	-0.06 (0.812)	-0.01 (0.952)	0.04 (0.823)	0.03 (0.863)	0.13 (0.478)	0.05 (0.734)	0.31 (0.084)	0.02 (0.921)	0.27 (0.131)	0.03 (0.888)
WhatsApp	-0.09 (0.000) *	0.00 (0.975)	0.35 (0.002) *	0.15 (0.230)	0.09 (0.410)	0.01 (0.966)	0.29 (0.009) *	-0.03 (0.727)	0.09 (0.462)	0.06 (0.440)	0.11 (0.158)	0.10 (0.460)
Classmates	0.16 (0.000) *	-0.17 (0.176)	-0.20 (0.265)	0.12 (0.509)	0.15 (0.278)	0.12 (0.520)	0.14 (0.391)	-0.13 (0.301)	-0.29 (0.124)	-0.04 (0.761)	0.08 (0.422)	-0.34 (0.012) *
LinkedIn	0.00 (0.948)	0.20 (0.014) *	0.40 (0.000) *	-0.24 (0.001) *	-0.02 (0.792)	-0.03 (0.797)	0.23 (0.009) *	0.19 (0.002) *	0.12 (0.168)	0.37 (0.000) *	-0.01 (0.831)	-0.07 (0.429)
Google+	-0.02 (0.416)	-0.07 (0.204)	0.02 (0.849)	0.05 (0.583)	0.04 (0.614)	0.04 (0.593)	-0.00 (0.999)	-0.11 (0.081)	0.08 (0.339)	0.07 (0.314)	0.14 (0.023) *	-0.01 (0.953)

Income predicted well-being (e.g., $r = 0.21$, $p < .001$ for happiness)

The same relationships, this time controlling for age (standardized), SES, the foreign family index, number of children, gender, city size (standardized), household population, race/ethnicity, the religiosity index, and the political conservatism index:

Table 11: Supplementary Table 8. Linear regression coefficients for predicting standardized well-being from use of social media platforms, controlling for demographic characteristics. * = p < .05

Social Media Platform	Happiness	Health	Depression	Bad mental health days	Ever breakdown	Exciting vs.dull life	Financial satisfaction	Relationship satisfaction	Social trust	Confidence in soc. institutions	Offline social contacts
# platforms	-0.00 (0.857)	-0.02 (0.335)	0.02 (0.223)	0.02 (0.280)	0.04 (0.067)	0.02 (0.427)	-0.01 (0.501)	0.04 (0.026) *	0.03 (0.030) *	0.01 (0.423)	0.02 (0.327)
Facebook	0.00 (0.994)	-0.24 (0.025) *	0.09 (0.333)	0.06 (0.449)	0.15 (0.132)	-0.08 (0.388)	-0.12 (0.104)	0.09 (0.294)	0.11 (0.096)	0.11 (0.072)	0.02 (0.875)
Twitter	-0.00 (0.958)	0.05 (0.701)	-0.01 (0.898)	0.04 (0.713)	-0.13 (0.221)	0.08 (0.333)	0.11 (0.238)	0.10 (0.309)	0.12 (0.124)	0.17 (0.018) *	0.00 (0.983)
Tumblr	-0.42 (0.003) *	-0.73 (0.000) *	0.36 (0.121)	0.15 (0.351)	0.21 (0.298)	-0.22 (0.236)	-0.25 (0.062)	-0.06 (0.750)	-0.08 (0.477)	-0.27 (0.010) *	0.22 (0.283)
Snapchat	0.13 (0.033) *	0.06 (0.623)	-0.07 (0.459)	-0.19 (0.021) *	0.00 (1.000)	0.17 (0.143)	0.15 (0.117)	0.22 (0.024) *	0.04 (0.588)	0.07 (0.380)	0.32 (0.013) *
Vine	0.03 (0.796)	-0.28 (0.188)	0.14 (0.353)	0.02 (0.871)	0.04 (0.810)	-0.16 (0.427)	0.11 (0.418)	0.25 (0.049) *	-0.14 (0.166)	0.22 (0.154)	0.16 (0.462)
Instagram	-0.01 (0.879)	-0.09 (0.338)	0.14 (0.096)	0.08 (0.425)	0.01 (0.922)	0.00 (0.998)	0.04 (0.551)	0.18 (0.088)	0.04 (0.495)	-0.02 (0.776)	0.22 (0.056)
Pinterest	0.08 (0.282)	-0.02 (0.785)	-0.01 (0.867)	0.04 (0.648)	0.24 (0.004) *	0.20 (0.028) *	-0.03 (0.620)	0.09 (0.346)	0.08 (0.229)	0.00 (0.998)	-0.25 (0.020) *
Flickr	0.16 (0.354)	-0.11 (0.611)	0.01 (0.925)	0.10 (0.588)	0.11 (0.553)	0.08 (0.686)	-0.10 (0.509)	0.34 (0.060)	-0.14 (0.387)	0.13 (0.470)	0.09 (0.690)
WhatsApp	-0.03 (0.787)	0.28 (0.028) *	0.18 (0.128)	0.16 (0.253)	0.15 (0.286)	0.17 (0.143)	-0.05 (0.649)	0.13 (0.302)	0.05 (0.561)	-0.11 (0.235)	0.12 (0.378)
Classmates	-0.20 (0.112)	-0.24 (0.130)	0.17 (0.304)	0.16 (0.252)	0.14 (0.453)	0.06 (0.669)	-0.18 (0.123)	-0.30 (0.106)	-0.10 (0.414)	0.08 (0.411)	-0.33 (0.011) *
LinkedIn	-0.01 (0.849)	0.22 (0.002) *	-0.04 (0.575)	0.08 (0.390)	0.07 (0.448)	0.02 (0.803)	-0.12 (0.052)	0.05 (0.528)	0.14 (0.053)	-0.11 (0.094)	0.05 (0.543)
Google+	-0.05 (0.421)	0.01 (0.923)	0.02 (0.770)	0.06 (0.428)	0.08 (0.338)	-0.08 (0.324)	-0.08 (0.195)	0.10 (0.248)	0.08 (0.208)	0.10 (0.093)	0.01 (0.931)

3.5 Self-Selection Bias and Propensity-Score Adjustment

Religiosity and respondent income were not included in the list of covariates because of relatively high proportions of missing data; including these variables would have reduced the effective sample size from 1161 to 554.

Table 4

Outcome	Unadjusted beta	IPTW average beta	IPTW 95% CI
Social media users (1) vs. non-users (0)			
Happiness	-0.08	-0.04	[-0.31, 0.20]
Health	-0.33*	-0.40*	[-0.70, -0.16]
Depression	0.21	0.12	[-0.15, 0.36]
Bad mental health days	-0.01	-0.15	[-0.69, 0.15]
Ever breakdown	0.47*	0.24	[-0.18, 0.61]
Exciting vs. dull life	-0.02	0.02	[-0.29, 0.38]
Financial satisfaction	-0.13	-0.00	[-0.32, 0.21]
Relationship satisfaction	-0.01	0.19	[-0.12, 0.53]
Social trust	0.08	0.19	[-0.06, 0.48]
Confidence in soc. institutions	0.12	0.12	[-0.07, 0.30]
Intensive social media users (1; 6+ platforms) vs. moderate users and non-users (0; 0-5 platforms)			
Happiness	0.00	-0.01	[-0.35, 0.32]
Health	0.21	0.25	[-0.07, 0.55]
Depression	0.02	0.05	[-0.22, 0.38]
Bad mental health days	0.12	-0.05	[-0.25, 0.29]
Ever breakdown	0.03	-0.06	[-0.42, 0.29]
Exciting vs. dull life	0.30*	0.33	[-0.24, 0.67]
Financial satisfaction	-0.07	-0.12	[-0.37, 0.36]
Relationship satisfaction	0.19	0.26	[-0.13, 0.52]
Social trust	0.01	0.15	[-0.09, 0.35]
Confidence in soc. institutions	0.13	0.15	[-0.15, 0.92]

The effect of social media use (vs. non-use) on ever having felt like having a breakdown was substantially reduced when adjusting for the propensity score (0.24 vs. 0.47 without adjustment) and in 11% of the bootstrap replicates, the effect was zero or smaller.

4. General Discussion

5. Conclusion