



Association Between Screen Time, Social Support, and Mental Health in Adolescents: Evidence from a Nationally Representative Sample in 2022

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BACKGROUND

- During the pandemic, adolescents' daily screen time increased by 52%.
- Social isolation and loneliness became a public crisis due to the pandemic.
- The COVID-19 pandemic has highlighted the critical importance of adolescent mental health.
- It is essential to monitor screen time and provide emotional support to help adolescents maintain their mental health.

OBJECTIVE

- This study aimed to estimate the association between screen time, social/emotional support, and mental health among adolescents using data collected during COVID-19.

DATA AND MEASURES

- Data: The study used the 2022 National Health Interview Survey's Sample Child Interview .
- Sample: Adolescents (aged 12 to 17).
- The outcome measures :
 - the frequency of children seeming sad or depressed on a scale from never to daily, and
 - a life satisfaction score on a scale from 0 to 10.
- The key independent variables:
 - whether a child had over two hours of daily screen time (i.e., time spent "in front of a TV, computer, cellphone, or other electronic device watching programs, playing games, accessing the internet, or using social media"), and
 - whether the child always received the social or emotional support they need.
- Other confounders:
 - age, sex, race/ethnicity, self-reported general health, BMI, family income, parent education, and urban/rural residence.
- Ordinary least squares regressions with survey weights were applied.

RESULTS

Figure 1: Percent adolescents report over two hours of daily screen time and support

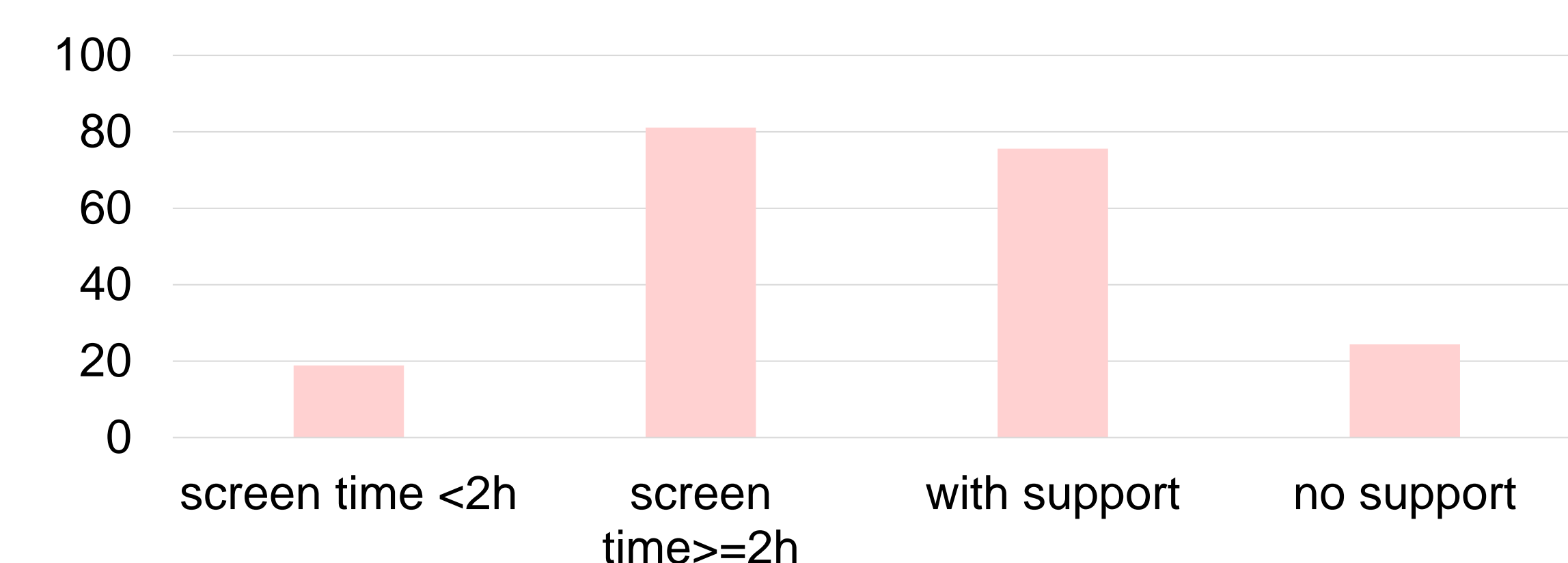


Table 1: Depression by screen time

	screen t<2h n=476		screen t >=2h n=2045		p
	mean	std dev	mean	std dev	
frequency of feeling depressed (1 daily; 5 never)	4.52	1.05	4.22	0.85	<0.001
a life satisfaction score on a scale from 0 to 10	9.03	1.63	8.52	1.42	<0.001

Table 2: Depression by screen time & support

	over 2h & no support n=535	over 2h & support n=1510	< 2h & no support n=80	< 2h & support n= 396
frequency of feeling depressed (1 daily; 5 never)	3.79	4.37	4.28	4.57
a life satisfaction score on a scale from 0 to 10	7.85	8.76	8.36	9.16

Table 1: Sample Characteristics

	screen time >=2h		screen time <2h	
	mean	Std.	mean	Std.
Female	0.49	0.50	0.49	0.50
Age	14.77	1.63	14.34	1.75
Race/Ethnicity				
Non Hispanic White	0.51	0.50	0.51	0.50
Non Hispanic Black	0.11	0.31	0.08	0.28
Hispanic	0.26	0.44	0.26	0.44
Non Hispanic Asian	0.07	0.25	0.08	0.27
Other Race/Ethnicity	0.06	0.24	0.07	0.25
Self reported Health				
Excellent	0.83	0.37	0.86	0.35
Great	0.14	0.34	0.11	0.31
Fair/poor	0.03	0.18	0.03	0.17

Table 1: Sample Characteristics, cont

	screen time >=2h		screen time <2h	
	mean	Std.	mean	Std.
Family Income				
<100% FPL	0.10	0.30	0.11	0.31
100 - 200% FPL	0.20	0.40	0.18	0.38
200 - 400% FPL	0.28	0.45	0.28	0.45
> 400% FPL	0.42	0.49	0.43	0.50
Parent highest level of education				
No high school	0.04	0.20	0.06	0.24
High school	0.30	0.46	0.26	0.44
College degree	0.41	0.49	0.39	0.49
Graduate School	0.24	0.43	0.29	0.45
Rural	0.13	0.33	0.18	0.39

Table 2: Ordinary least squares regressions with survey weights were applied: Screen time

	frequency of feeling depressed (1 daily; 5 never)		a life satisfaction score on a scale from 0 to 10	
	Coefficient	p	Coefficient	p
screen >2h	-0.32	0.00	-0.53	0.00
Female	-0.39	0.00	-0.20	0.01
Age	-0.04	0.01	-0.04	0.05
White	ref		ref	
Black	0.32	0.00	0.39	0.01
Hispanic	0.33	0.00	0.76	0.00
Asian	0.24	0.00	0.56	0.00
Other				
Race/Ethnicity	-0.11	0.36	-0.13	0.34
<100% FPL	ref		ref	
100 - 200% FPL	0.18	0.06	-0.01	0.93
200 - 400% FPL	0.16	0.11	-0.04	0.77
> 400% FPL	0.16	0.14	0.02	0.90
No high school	Ref		ref	
High school	-0.10	0.43	0.11	0.56
College degree	-0.11	0.41	0.02	0.91
Graduate School	-0.02	0.86	0.13	0.53
Poor health	ref		ref	
Excellent	1.15	0.00	1.99	0.00
Great	0.74	0.00	1.20	0.00
Rural	0.03	0.76	0.06	0.68
Constant	4.03	0.00	7.58	0.00

Table 3: Ordinary least squares regressions with survey weights were applied: Screen time and support

	frequency of feeling depressed (1 daily; 5 never)		a life satisfaction score on a scale from 0 to 10	
	Coefficient	p	Coefficient	p
over 2h & no support				
< 2h & support	0.82	0.00	1.36	0.00
over 2h & support	0.58	0.00	0.87	0.00
< 2h & no support	0.46	0.00	0.35	0.11

RESULTS

- The final sample included 2,599 adolescents.
- Among them, 81% reported over two hours of daily screen time, and over 76% reported always receiving social support.
- The results showed that having over two hours of daily screen time was significantly associated with higher frequencies of seeming depressed and lower scores of life satisfaction.
- Children who had less than two hours of daily screen time and always received social support had the lowest association with high frequencies of seeming depressed (coef: 0.82, p<0.001) and the highest association with high life satisfaction scores (coef: 1.36, p<0.001) compared to those with over two hours of daily screen time and didn't always receive social/emotional support.

LIMITATIONS

- Parents reported on their children's depression and life satisfaction, which may not accurately reflect the children's actual feelings of life satisfaction.
- The maximum daily screen time reported was two hours.
- There were no specific metrics used to measure how screen time was spent.
- The study did not provide details on the emotional support offered to the adolescents.

IMPLICATIONS

- These findings suggested that managing screen time effectively and providing robust social support will benefit the mental health of adolescents during the pandemic.

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