What is the Relationship Between Social Media Use, Depressive Symptoms, and SES for Teens in the US?

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ABSTRACT

Social media platforms have increasingly fulfilled an integrated communication role in our society. Studies on the effects of social media use on mental health by socioeconomic status (SES) in youth are rare. Given the mixed results about the influence social media use exerts on mental health in teens, the purpose of this study is to examine the relationship of social media use on depressive symptoms in low SES teens in the US. The current study is a secondary analysis of the data from Monitoring the Future (MTF). The survey consisted of a cross-sectional sample of 30,181 US teens. Findings indicate: 1) those who self-reported low social media use demonstrating higher depressive symptom scores than other responses, 2) an association was found between parent education level (SES), social media use, and depressive symptoms in teens, with teens that report a higher SES and lower social media use, disclosing higher depressive symptoms. The key implications of these findings include further exploring digital communication as a potential protective factor in youth. Future considerations in practice include incorporating clinical depression screening tools and evidence-based interventions reflective of social media use practices in teens.

INTRODUCTION

Significance of Study

- About 95% of teens report having complete access to a smartphone, with 45% reporting consistent online activity on a daily basis.
- 31% of teens cite social media use as a positive effect on their lives, 24% report mostly a negative effect and 45% have reported no effect at all.
- The relationship between social media use and depressive symptoms by SES has been understudied.

Purpose of Research

- The purpose of this current study is to examine the relationship of social media use on depressive symptoms in low SES adolescents in the US.

Research Questions

- What is the relationship between social media use, depressive symptoms and SES for teens in the US?

Hypotheses

1. With increased social media use, depressive symptoms will also increase in low SES teens.
2. Depressive symptoms will be stronger for low SES teens engaged in social media than other SES statuses.

LITERATURE REVIEW

Social Media Use and Depressive Symptoms

- About 3.2 million US teens, ages 12-17, experience at least one major depressive episode, representing 13.3% of the US teen population.
- There is a direct correlation between an increase in the time spent in social media and an increase in depressive symptoms.
- There is no statistical significance between social media use and severity of depressive symptoms.

Social Media Use as Social Support

- Social media use is a self-perception and feedback-seeking support system.
- Teens develop their social identity through online interactions, but can lead to low self-esteem in some.

Gaps and Limitations

- Limitations include: a lack of causality between variables, the presence of confounding factors, and missing common language to define depressive symptoms among researchers

METHODOLOGY

Research Design

- Data drawn from the nationwide Monitoring the Future (MTF) survey, with a multi-stage random sampling procedure and a longitudinal study design.
- Data collected in 3 stages: 1) selection of subjects by US geographical region: Midwest, Northeast, South, and West, 2) random selection of middle schools and high schools (both private and public) that fit a similar profile of characteristics: size, urban concentration, etc., 3) a ratio of 350 students per school.
- The current study focuses on one specific wave, the 2017 survey, as a cross-sectional design.

Sample

- Data set sampled 30,181 adolescent participants across the US.
- Subjects represent eighth (16,010) and tenth (14,171) grade students.
- Response rates by participants: 87% for 8th-grade students and 85% for 10th-grade students.

Operational Definitions

- The independent variable was social media use. Frequency was measured by respondents answering Likert-scale questions: "About how many hours a week do you spend visiting social networking websites like Facebook?" and "How often do you do each of the following? Visit social networking websites (like Facebook)."
- The dependent variable was depressive symptoms. A mean score for depressive symptoms was calculated by taking the average of four items and creating a depressive symptom index. The four statements answered by participants included: "The future often seems hopeless," "Life often seems meaningless," "It feels good to be alive," and "I enjoy life as much as anyone."
- Covariates included socioeconomic status (SES), measured by participants' responses to parental education attainment, with responses including: 1= completed high school, some high school, and completed grade school or less, and 2= graduate, completed college, and some college. Additional demographic variables included: school grade, region, age, gender, and race/ethnicity.

Table 1

Demographics of Sample (N= 30,181)

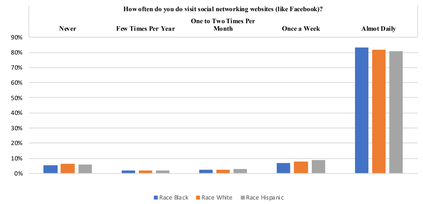
Demographics	*f*	%
School Grade		
8th Grade	16,010	53
10th Grade	14,171	47
School Region		
Northeast	5,267	17.5
North Central	7,348	24.3
South	10,195	33.8
West	7,371	24.4
Age		
Less than 16	5,811	42.4
More than 16	7,894	57.6
Gender		
Male	14,183	49.7
Female	14,340	50.3
Race/Ethnicity		
Black	3,392	14.6
White	13,062	56.2
Hispanic	6,789	29.2
Parental Education Level- Father		
Low (Grade School/Some High School/High School Graduate)	10,440	44
High (Some College/College Graduate/Graduate School)	13,258	56
Parental Education Level- Mother		
Low (Grade School/Some High School/High School Graduate)	8,571	33.7
High (Some College/College Graduate/Graduate School)	16,845	66.3
	Mean	SD
Social Media- How often use	4.6	1.1
Depression Index	2.2	1.1

Table 2

Nonparametric Test Analyses for Depression and Race, School Grade, Gender, Social Media Use, and SES

	Mean Rank	Test Statistic	DF	Sig.
Kruskal-Wallis H Test				
Race				
Black	5,359.66	88.01	2	.000
Hispanic	5,693.94	88.01	2	.000
White	5,064.23	88.01	2	.000
Social Media- How often use				
Never	6,204.64	19.77	4	.001
Few Times Year	6,637.45	19.77	4	.001
1-2X Month	7,236.95	19.77	4	.001
Once A Week	6,742.00	19.77	4	.001
Almost Daily	6,671.16	19.77	4	.001
Low SES- Social Media				
Never	2,239.89	8.84	4	.065
Few Times Year	1,888.90	8.84	4	.065
1-2X Month	2,398.81	8.84	4	.065
Once A Week	2,382.87	8.84	4	.065
Almost Daily	2,314.07	8.84	4	.065
High SES- Social Media				
Never	2,775.48	20.74	4	.000
Few Times Year	3,375.28	20.74	4	.000
1-2X Month	3,472.94	20.74	4	.000
Once A Week	3,083.58	20.74	4	.000
Almost Daily	3,074.12	20.74	4	.000
Mann-Whitney U Test				
Gender				
Female	6,970.02	24,220,694.00		.000
Male	5,940.85	24,220,694.00		.000
School Grade				
8th Grade	6,506.12	23,620,771.00		.000
10th Grade	6,886.77	23,620,771.00		.000

Figure 1. Frequency of Social Media Use and Race.



RESULTS

Social Media Use, Depressive Symptoms, and Demographics

- Chi-square tests analyzed the relationship between social media use and demographic characteristics. Results: Social media use and race/ethnicity yielded a significant association ($x2(8) = 13.78$, $p = 0.03$), with most races/ethnicities reporting daily social media use.
- A Mann-Whitney U test analyzed the relationship between depressive symptoms and school grade levels. Results: A significant association was found ($U = 23,620,771$, $p < .01$), with 8th graders having significantly lower depression scores than those who were in 10th grade.

Social Media Use, Depressive Symptoms, and SES

- A Kruskal-Wallis H test examined the relationship between social media use and depressive symptoms. Results: A significant association was found ($H(4)= 19.77$, $p < .01$), with participants who reported engaging in social media "1-2 times per month" having higher depression scores than other responses.
- A Kruskal-Wallis H test examined the association between social media use, depressive symptom scores, and teens by low and high SES. Results: A significant association was found ($H(4) = 20.74$, $p < .01$), with teens who identified as high SES and reported engaging "1-2 times per month" demonstrating the highest depression scores.

DISCUSSION

Summary of Findings

- All races/ethnicities reported daily social media use over other responses.
- 8th-grade participants reported having lower depression scores than 10th graders.
- Female participants reported having higher depressive symptoms than their male counterparts.
- Hispanic teens demonstrated higher depression scores, followed by Black and White teens.

Major Findings

- Participants who reported engaging in social media less ("1-2 times per month") had higher depression scores than other responses.
- Teens who identified as high SES and reported engaging "1-2 times per month" demonstrated the highest depression scores.
- The results did not support the two hypotheses proposed by the current study, instead suggesting a negative association between social media use and depressive symptoms.

Implications for Research and Practice

- With increased social media use, depressive symptoms decrease, suggesting that there is reason to explore digital communication as a potential protective factor in youth.
- Clinicians should explore digital interventions as a way to further build rapport and engage teens in session.
- Results may further contribute to the growing body of work considering technology use as a pathological disorder and guide the development of future depression screening instruments for youth in the social work field.

Strengths and Limitations

Strengths:

- There was a strong representativeness of subjects in the secondary data.
- The dataset included a large and randomly selected pool of subjects from all over the US, by region, school site type, and gender.

Limitations:

- Causation between variables cannot be inferred due to cross-sectional design.
- Potential bias due to use of self-reporting measurements to indicate depressive symptoms among subjects, stronger actuarial screening tools needed for future research.
- SES was determined by considering parents' education level as the proxy for measuring SES, for future studies, expanding SES to include household income and social capital will produce a more accurate SES.

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