

The Effects of Computer Usage and Parental Relationships on Depression and Body Dissatisfaction Among Adolescent Girls

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Abstract

Adolescent girls are prone to body dissatisfaction as their body is changing rapidly, and they are faced with the pressure to meet current beauty standards. Failure to adapt to these body changes and dissatisfaction with body image may predict depression, sadness, and low self-esteem. This study aims to investigate the effects of computer usage and parental relationships on depression and body dissatisfaction among adolescent girls. Data from 14,627 youth participated in the self-report survey of the Health Behavior in School-Ages Children (HBSC) data from 2009-to 2010. The HBSC is a longitudinal study consisting of a three-stage stratified design. The participants were in grades 5th-10th in the U.S and 11-15 years old in the District of Columbia. The study's goal was to assess health-risk behaviors and attitudes in youth. Results indicated no significant difference between body dissatisfaction and depression and sadness among adolescent girls. There was also no significance between the relationship between perceptions of parental relationships and body dissatisfaction among adolescent girls. However, adolescent girls who experienced sadness were online longer hours than study participants who spent less time online. The study provided a basis for awareness and interventions to improve body satisfaction among adolescent girls.

Introduction

Significance of Study

- Body dissatisfaction has been linked to the development of eating disorders, low self-esteem, unhealthy weight control behaviors, poor psychological functioning, and depressive symptoms (Evans et al., 2013).
- Girls reported higher levels of body dissatisfaction and depressive symptoms than boys, though the girl's weight was substantially lower than them (Xie et al., 2010).

Purpose of the Research

The study aims to examine the effects of computer usage and parental relationships on depression and body dissatisfaction among adolescent girls.

Research Questions

- What is the relationship between perceptions of parental relationships and body dissatisfaction among adolescent girls?
- What is the relationship of online engagement and levels of depression and sadness among adolescent girls who experience body dissatisfaction?
- What is the relationship of body dissatisfaction and depression and sadness among adolescent girls.

Hypothesis

Body dissatisfaction leads to high levels of depression among adolescents due to constant exposure to idealized female images in the media. The study also hypothesized that adolescent girls with family support and connectedness have lower psychological conditions with body dissatisfaction.

Literature Review

- 10-20% of adolescent girls in school settings report disordered eating behaviors and expressing weight concerns, fear of gaining weight, unaware of weight loss, and uncontrollable eating behaviors (Evans et al., 2013).
- Body dissatisfaction is a risk factor for depressive mood and low self-esteem over the five years in both girls and boys. One's perceived failure to meet current beauty standards is likely to increase negative self-evaluation and depressive mood (Paxton et al., 2006).
- Media exposure to idealized body images are associated with body dissatisfaction, increased levels of internalization, and disordered eating for young girls (Tiggemann & Slater, 2014).
- Positive family communication and relationships, especially among girls, is an important factor for adolescents' self-esteem. Adolescents are less dissatisfied with their bodies overtime when they have a strong parent-adolescent relationship (De Vries & Vossen, 2019).

Research Gaps

- Other factors may negatively impact appearance and depression and be bidirectional (Davison & McCabe, 2006).
- Experimental designs can also be conducted to manipulate internet exposure and body dissatisfaction overtime for more accurate results (Tiggemann & Slater, 2014).

Methods

Research Design and Data Collections Procedures

- This study was a secondary analysis of the Health Behavior in School-Ages Children (HBSC) data from 2009-2010.
- HBSC is an independent longitudinal national survey of school-aged children that have participated in over 40 countries to assess health-risk behaviors and attitudes.
- Survey was administered by a school representative and three forms of the self-report survey were conducted.

Sample and Sampling Method

- The sampling frame is a nationwide sample collected through a longitudinal three-stage stratified design.
- A total of 475 eligible schools participated in the survey, and a total of 12,642 participants (N=12,642) were found eligible for the study. The participants had to be in grades 5th-10th in the U.S and 11-15 years old in the District of Columbia.

Measures

- Adolescent Girls' Life Satisfaction and Body Dissatisfaction
 - Measured through a nominal scale through a self-reporting questionnaire of how the adolescent is feeling last week and feelings about their bodies
- Computer usage and Parental Relationships
 - Measure through a nominal scale through a self-reporting questionnaire of daily hours spent on the computer and perceived relationship with parent/guardian

Results

Analysis of Chi-Square Results

- There was **no significant relationship** between body dissatisfaction and depression and sadness between girls and boys ($\chi^2(df) = 16, p = <.001$)
- There was **no significant relationship** between perceptions of parental relationships and body dissatisfaction between girls and boys ($\chi^2(df) = 12, p = <.001$)

Analysis of One-way ANOVA

- A **significant** difference was found among time spent online among adolescent girls ($F(7, 11696) = 44.97, p = <.001$). Bonferroni's post hoc test was used to determine the nature of the difference between time online. This analysis revealed the study participants who experienced sadness were online longer hours ($M = 3.23, SD = 1.33$) than study participants who spent less time online ($M = 3.8, SD = 1.10$).

Sample Characteristics (N=12,642)

Characteristic	f	%
Gender		
Male	6502	51.4
Female	6136	48.5
Age in years	<i>M</i> = 12.05	<i>SD</i> = 1.751
Race		
Hispanic or Latino	2392	18.9
Two or More Races	828	6.5
Black or African American	2164	17.1
White	5903	46.7
Asian	469	3.7
American Indian or Alaska Native	222	1.8
Native Hawaiian or Other Pacific Islander	111	0.9
Grade in School		
Grade 5	1717	13.6
Grade 6	2050	16.2
Grade 7	2421	19.2
Grade 8	2475	19.6
Grade 9	2072	16.4
Grade 10	1907	15.1
Age		
10 and younger	1,157	9.2
11	1,828	14.5
12	2,229	17.6
13	2,473	19.6
14	2,143	17.0
15	1,888	14.9
16	772	6.1
17 and older	133	1.1

Descriptive Statistics: Study Variables (N = 12,642)

Variables	f	%
Feeling sad past week		
Never	778	6.2
Seldom	1399	11.1
Quite often	2026	16.0
Very often	4995	39.5
Always	2900	22.9
Online engagement/daily average of hours	<i>M</i> = 4.44	<i>SD</i> = 2.131
Parental relationship		
Makes me feel better when upset	<i>M</i> = 1.81	<i>SD</i> = .787
Understands my problems	<i>M</i> = 1.73	<i>SD</i> = .779
Body dissatisfaction: Hate my body	<i>M</i> = 1.85	<i>SD</i> = 1.152

Results of Chi-Square Test

Relationship between body dissatisfaction and depression and sadness among adolescent girls		Feeling Past Week: Sad									
		Never		Seldom		Quite Often		Very Often		Always	
Gender	Feeling About Body: Hate My Body	n	%	n	%	n	%	n	%	n	%
Females	Strongly disagree	123	4.6%	264	9.8%	440	16.4%	1208	44.9%	653	24.3%
	Disagree	81	6.2%	206	15.7%	276	21.0%	559	42.5%	192	14.6%
	Neither agree or disagree	76	8.8%	190	22.0%	210	24.3%	301	34.8%	88	10.2%
	Agree	62	12.3%	135	26.8%	128	25.4%	140	27.8%	39	7.7%
	Strongly Agree	127	36.6%	79	22.8%	73	21.0%	35	10.1%	33	9.5%

Relationship between parental relationship and body dissatisfaction among adolescent girls		Feeling Past Week: Sad									
		Never		Seldom		Quite Often		Very Often		Always	
Gender	Parent/Guardian: Makes Me Feel Better When Upset	n	%	n	%	n	%	n	%	n	%
Females	Strongly disagree	96	2.6%	213	5.8%	446	12.2%	1647	45.1%	1248	34.2%
	Disagree	48	4.2%	98	8.6%	179	15.7%	550	48.2%	266	23.3%
	Neither agree or disagree	34	5.4%	82	13.0%	120	19.0%	263	41.7%	132	20.9%
	Agree	32	12.8%	50	20.0%	44	17.6%	78	31.2%	46	18.4%
	Strongly Agree	54	32.3%	21	12.6%	25	15.0%	25	15.0%	42	25.1%

Relationship between parental relationship and body dissatisfaction among adolescent girls		Feeling About Body: Hate My Body									
		Strongly disagree		Disagree		Neither agree or disagree		Agree		Strongly agree	
Gender	Parent/Guardian: Makes Me Feel Better When Upset	n	%	n	%	n	%	n	%	n	%
Females	Almost always	907	55.4%	357	21.8%	210	12.8%	99	6.0%	65	4.0%
	Sometimes	592	38.8%	422	27.6%	275	18.0%	172	11.3%	66	4.3%
	Almost never	228	27.1%	184	21.9%	187	22.2%	122	14.3%	121	14.2%
	Don't have or don't see parent/guardian	13	39.4%	3	9.1%	5	15.2%	8	24.2%	4	12.1%

Relationship between parental relationship and body dissatisfaction among adolescent girls		Feeling About Body: Hate My Body									
		Strongly disagree		Disagree		Neither agree or disagree		Agree		Strongly agree	
Gender	Parent/Guardian: Makes Me Feel Better When Upset	n	%	n	%	n	%	n	%	n	%
Females	Almost always	1202	69.0%	303	17.4%	154	8.8%	46	2.6%	37	2.1%
	Sometimes	918	59.1%	362	23.3%	199	12.8%	52	3.3%	22	1.4%
	Almost never	398	49.2%	171	21.1%	123	15.2%	69	8.5%	48	5.9%
	Don't have or don't see parent/guardian	27	55.1%	12	24.5%	4	8.2%	3	6.1%	3	6.1%

Table 5

Results of One-Way ANOVA for Effects of Time Online and Depression/Sadness Among Adolescent Girls

	None at all	1 to 1.99 hours	2 to 2.99 hours	3 to 3.99 hours	4 to 4.99 hours	5 to 5.99 hours	6 to 6.99 hours	7 or more hours	ANOVA										
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>df</i>	<i>p</i>								
Feeling past week: Sad	3.76	1.212	3.80	1.100	3.80	1.031	3.64	1.098	3.54	1.144	3.31	1.197	3.26	11250	3.23	1.332	44.975	7	<.001

Conclusions

Discussion

- Inconsistent with the study's hypothesis and literature:
 - There was no significant difference between body dissatisfaction and depression and sadness among adolescent girls.
 - There was also no significant relationship between the relationship between perceptions of parental relationships and body dissatisfaction among adolescent girls.
- Consistent with the current study hypothesis and literature:
 - Adolescent girls who experienced sadness were online longer hours than study participants who spent less time online.

Strengths and Limitations

- The current study relies on students' self-report data based on their perceptions. Other reported survey data should be gathered from participants' friends, guardians, or parents on body dissatisfaction and sadness behaviors.
- Not all students have access to a computer and computer usage may not accurately represent the assumption that all adolescents will come across idealized female images or other images that may lead to body dissatisfaction
- Body dissatisfaction is complex, and additional contributing factors and culture should be examined to identify the relationship between depression and sadness
- Strengths include utilizing a large national sample size and longitudinal study to identify patterns. The sample size was ethnically diverse participants in the United States

Implications for Practice and Policy

- The current study serves to advocate for consistent and future research about body dissatisfaction among adolescent girls
- Additional research that utilizes comparable groups is necessary to understand the development of body dissatisfaction and depression prior to conducting research for interventions.
- The need to develop programs to reduce body dissatisfaction, low self-esteem and depression among girls.
- Psychoeducation, therapy, and support groups are possible interventions to address body dissatisfaction.
- Increase positive adolescent-parent relationships to strengthen communication and possible concerns that lead to body dissatisfaction

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