BSc in Psychology

The relationship between social media use and self-esteem: gender difference and the effects of parental support.

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Author: Hanna Rún Ingólfsdóttir ID number: 281089-2349

Abstract

Self-esteem is one of the most common constructs studied regarding adolescence. Self-esteem is defined as one´s sense of pride, positive evaluation or self-respect. Research has shown that self-esteem increases throughout childhood but decreases in adolescence, though the decrease is greater for girls. Recently the use of social media has increased dramatically, and research on how self-esteem can be impacted has become more common. Research has shown that girls often report lower self-esteem than boys and also that those who spend more time on social media report lower self-esteem. Present study analysed how gender and hours spent on social media could impact adolescents´ self-esteem. The survey was conducted by ICRSA in February 2016 and was a quantitative cross-sectional study. Total number of participants was 10,687, however, a random sample of 2039 participants was used. The total response rate nationwide was 86%. Results showed that girls had lower self-esteem than boys, and that those who spent most time on social media had lower self-esteem. The results are analogous to previous research. It can be concluded that girls are more likely to have low self-esteem than boys. Furthermore, to spend a lot of time on social media can impact adolescents´ self-esteem.

Keywords: Self-esteem, social media, gender difference, parental support.

Útdráttur

Sjálfstraust er ein algengasta hugsmíðin skoðuð í tengslum við unglingsárin. Sjálfstraust er gjarnan skilgreint sem stolt, jákvætt gildismat eða sjálfsvirðing einstaklings. Rannsóknir hafa sýnt að sjálfstraust eykst í gegnum barnæsku en síðan dregst úr því á unglingsárunum, og þá meira hjá stelpum. Á undanförnum árum hefur samfélagsmiðlanotkun aukist gríðarlega, og rannsóknir á hvernig sjálfstraust getur orðið fyrir áhrifum þess hafa gerst algengari. Rannsóknir hafa sýnt að stelpur eru með lægra sjálfstraust en strákar og þeir sem eyða meiri tíma á samfélagsmiðlum á dag hafa lægra sjálfstraust. Rannsókn þessi skoðaði hvernig kyn og tíma eyddum á samfélagsmiðlum á dag gæti haft áhrif á sjálfstraust ungmenna. Rannsóknin var framkvæmd af R&G í febrúar árið 2016 og var þversniðsrannsókn. Heildarfjöldi þátttakenda var 10687, hinsvegar var notast við úrtak 2039 þátttakenda við gerð þessarar rannsóknar. Heildarsvarhlutfall var 86%. Niðurstöður sýndu að stelpur voru með lægra sjálfstraust en strákar og að þeir sem eyddu mestum tíma á samfélagsmiðlum á dag voru með lægra sjálfstraust. Niðurstöður eru í samræmi við fyrri rannsóknir. Hægt er að ályktа að stelpur eru líklegri til þess að hafa lægra sjálfstraust en strákar og að þeir sem eyða miklum tíma á samfélagsmiðlum á dag hafa lægra sjálfstraust.

Foreword and Acknowledgements

Submitted in partial fulfilment of the requirements of the BSc Psychology degree, Reykjavík University, this thesis is presented in the style of an article for submission to a peer-reviewed journal.

I would like send special thanks to the Icelandic Centre for Social Research and Analysis for giving me the opportunity to work my thesis from their *Youth in Iceland 2016* data.

The impact of social media use on self-esteem: gender difference and the effects of parental support.

In modern society the idea of self-esteem is everywhere, in schools, sporting teams and workplaces (Orth & Robins, 2014). Self-esteem is often defined as how negatively or positively an individual perceives their own self-worth, one´s sense of pride, positive self-evaluation or self-respect (McLellan et al., 2011; Meyer, 2008; Suzuki & Shunsuke, 2013). One of the most common constructs looked at regarding adolescence is self-esteem (Boden, 2011).

One of the main topics examined while studying self-esteem is the gender difference (Zuckerman, Li, & Hall, 2016). Over the years it has been shown that boys usually report higher levels of self-esteem than girls (Birndorf, Ryan, Auinger, & Aten, 2005; Bleidorn et al., 2015; Sprecher, Brooks, & Avogo, 2013). Previous research has shown that self-esteem is a U-shaped process where self-esteem increases during childhood and then decreases during adolescence before rising again in young adulthood, and the changes during this process were more dramatic for girls than for boys, where the drop in self-esteem was more drastic for girls (Cai, Wu, Luo, & Yang, 2014; Meyer, 2008). Gender difference in self-esteem has been correlated with appearance satisfaction (Kling, Hyde, Showers, & Buswell, 1999). According to a meta-analysis of 115 studies done by Gentile et al. (2009) there was no significant difference in appearance self-esteem during the 1970s but the difference started to show after the 1980s and they speculated that a possible cause for the increase in gender difference was that the media started to put more focus on appearance. One of the reasons stated for the gender difference in self-esteem during adolescence is that puberty starts earlier with girls and therefore their physical appearance changes a lot during those years, thus making adolescence a more sensitive period for girls (Kling et al., 1999; Zuckerman et al., 2016).

It has been shown that self-esteem decreases during adolescence (Cai et al., 2014;

Meyer, 2008). There are a lot of socio cultural factors that have been shown to impact self-esteem such as the media, TV, advertising, music videos, magazines, socio-economic status, personality, mental health and support from family members (Clay, Vignoles, & Dittmar, 2005; Veselska et al., 2010). These factors can lead to appearance related social comparison which can result in worse psychological functioning (Lindner, Tantleff-Dunn, & Jentsch, 2012). Research has shown that individuals with high self-esteem show more downward social comparison compared to those with low self-esteem (Cramer, Song, & Drent, 2016). With the emergence of social media sites social comparison has become a lot easier for adolescents, with approximately 90% of them active online day and night (Woods & Scott, 2016). Research has shown that adolescents both show downward social comparison and upward social comparison (Vogel, Rose, Roberts, & Eckles, 2014). Upward social comparison refers to those who compare themselves to others who seem to be in a better place in life and downward social comparison is when an individual compares himself to others that seem worse off (Mahler, Kulik, Gerrard, & Gibbons, 2010)

In recent years the use of social media accounts such as Facebook, Snapchat, Instagram etc. has increased dramatically (Andreassen, Pallesen, & Griffiths, 2017; Sanfilippo, 2015). It has been stated that one third of the world´s population is active on social media (Hawi & Samaha, 2016). Social media use and its increase has created a new research platform and it has become more evident that there is need to further examine how social media can influence various aspects of life, including adolescents' self-esteem. Up to date, studies on the relationship between social media and self-esteem have revealed that those who spend more time on social media report lower levels of self-esteem (Vogel, Rose, Okdie, Eckles, & Franz, 2015).

Research on addictive social media use has shown it to be correlated with self-esteem (Andreassen et al., 2017). It has been shown that those who spend more time on social media

show upward social comparison which can have a negative effect on adolescents (Lewallen & Behm-Morawitz, 2016). One of the factors that can be impacted are adolescents´ self-esteem (Vogel et al., 2015). Those who are described as addictive to social media report lower levels of self-esteem according to Hawi & Samaha (2016). Andreassen (2015) argued that those who show addictive social media behavior tend to spend much off their time thinking about social media and are constantly trying to find ways to free up more time for social media use. Addiction to social media is however not the same thing as excessive use like logging out right before going to sleep or logging onto social media accounts first thing in the morning (Andreassen, 2015).

It has been reported that social media use is rapidly increasing, in particular spending more time on YouTube, Facebook and Twitter (Seo, Houston, Knight, Kennedy, & Inglish, 2014). With this increase in social media use adolescents tend to evaluate their own self-worth and popularity based on how many friends they have or how many likes they get on their profile pictures on Facebook (Cookingham & Ryan, 2015). Facebook has been found to be one of the most popular social media sites (Seo et al., 2014). When looking at Facebook posts the first thing most individuals look to is how many likes a profile picture gets. A positive feedback on Facebook should boost levels of self-esteem (Burrow & Rainone, 2016). However, when evaluating that fact it must be taken into consideration that it may be offering a false sense of security (Best, Manktelow, & Taylor, 2014). When looking at the difference in Facebook activity between those who report high levels of self-esteem compared to those who report lower levels, their activity online is different. Those with higher levels of self-esteem seem to be more active in posting new pictures or status updates whereas those with lower levels of self-esteem are not comfortable sharing information about themselves in that setting (Tazghini & Siedlecki, 2013). Furthermore, research has also shown that spending a great amount of time on social media can increase the risk for both depression and social

isolation (Best et al., 2014). In addition, research has shown that girls are more likely to show physical appearance comparison and with the pressure of posting photos online they are more active on sites such as Instagram and Facebook. Girls tend to show more social comparison online which are self-relevant and can be threating to their self-worth, which can lead to higher levels of depression and lower levels of self-esteem (Nesi & Prinstein, 2015).

Although a lot of research has shown social media to have a negative effect on the psychological functioning of adolescents there are studies that show social media to have positive effect on adolescents (Hamm et al., 2014; Sanfilippo, 2015). Social media sites have been used to encourage healthy lifestyles such as healthy eating and exercise and it has been shown to be effective (Hamm et al., 2014). Another thing that has been looked at in relation to the positive effect social media can have on self-esteem is the relationship between personality traits and social media use. That concluded that there was a positive relationship between a few personality traits, such as extraversion, and comments that were posted on their social media (Wang, Jackson, Zhang, & Su, 2012). In addition is has been shown that social media can boost the self-esteem of those who struggle with social anxiety. That is thought to be because communication through social media is much easier for them rather than communicating face to face (Joinson, 2004).

It has been shown that parents play a big role in the development of their children and adolescents. Research regarding self-esteem has looked into if adolescents have support from their parents (Bean, Bush, McKenry, & Wilson, 2003). Parental support refers to the sense of acceptance, warmth, affection and nurturance that adolescents feel they get from their parents (Barber, Stolz, Olsen, Collins, & Burchinal, 2005). Adolescents that receive high levels of parental support and behavior monitoring have better health and are more adequate than adolescents that don´t receive the same parenting style (Bean et al., 2003). Perceived parental support has also been shown to reduce depressive symptoms in adolescence. In addition

perceived parental support can function as a buffer for individuals with pessimistic attributional style (Rueger & Malecki, 2011). A longitudinal study conducted by Boudreault-Bouchard et al. (2013) investigated the relationship between parental emotional support and adolescents´ self-esteem. Their results indicated that adolescents that receive high levels of parental emotional support have higher self-esteem than others (Boudreault-Bouchard et al., 2013).

Previous research is in agreement that girls overall have lower levels of self-esteem than boys. However, there is a disagreement regarding the influence social media use can have on self-esteem. It has been shown that self-esteem can be influenced by social media use although the reason for the influence has yet to be established. Furthermore, previous research is not in agreement as to if the influence of social media use has a positive or negative impact on self-esteem.

The aim of this study is to show that there is a relationship between spending a quantity of time on social media per day and adolescents´ self-esteem and also to show that girls have lower levels of self-esteem than boys. In addition, the study will look at if parental support can buffer the relationship between social media use and self-esteem in adolescence. The hypothesis´ of the current research are, (1): Girls have lower levels of self-esteem than boys, (2): Those who spend more time on social media per day have lower levels of self-esteem, (3): Girls that spend the most time on social media per day have the lowest level of self-esteem, and (4): Parental support buffers the relationship between social media use and self-esteem.

Method

Participants

Data from the survey *Youth in Iceland 2016* were used in this study. All aspects of data collection were supervised by the Icelandic Centre for Social Research and Analysis

(ICRSA) in February of 2016. The total number of participants was 10,687 (Guðmundsdóttir et al., 2016). A random sample of 2039 participants was used in this study, with 980 males (48%), 1041 females (51%) and 18 (1%) did not reveal their gender. The age range was from 12 to 17 with the mean age of 15 years (*SD* = .83). The population used were all students in 8th, 9th, and 10th grade in all Icelandic lower secondary schools. All students present in class the day the survey took place answered the questionnaire. The participants did not have to sign a form of consent before participating and did not receive course credit or money for their participation.

Instruments and measures

The main instrument used was a thorough questionnaire from ICRSA which has been in constant development over the past 20 years. The questionnaire contained 88 questions which were displayed on 32 pages.

Self-esteem was measured with the Rosenberg self-esteem scale (RSES) (Rosenberg, 1965). Studies have shown the RSES to have good construct validity ranging from $\alpha = .71 - .86$ (Robins, Hendin, & Trzesniewski, 2001; Supple, Su, Plunkett, Peterson, & Bush, 2013; Westaway, Jordaan, & Tsai, 2015). The RSES has also shown to be consistent over time with test-retest reliability ($r = .90$) (Webster, Smith, Brunell, Paddock, & Nezlek, 2016).

The RSES consist of ten statements regarding how adolescents evaluate their own self-worth. Five statements were phrased in a positive way (e.g. *On the whole I am satisfied with myself*) and the other five were phrased negatively (e.g. *At times I think I am no good at all*). Those questions phrased negatively were reversed so that all the questions would be congruent. The questions were all measured on a four-point scale (1 = Strongly agree, 2 = Agree, 3 = Disagree, and 4 = Strongly disagree). During data processing all the questions were computed into one variable and named Self-esteem. Cronbach´s alpha for the questions was acceptable ($\alpha = 0.90$). Self-esteem took the value from 0 – 30, where 0 represented very

high self-esteem and 30 represented very low self-esteem.

One question was used to measure how much time adolescents spent on social media each day. The question applied to hours spent on social media sites such as Snapchat, Facebook, Instagram, Twitter, Tumblr and other analogues sites. The question was measured on an eight-point scale (1 = Almost no time, 2 = About ½ - 1 hour, 3 = About 1 hour, 4 = About 2 hours, 5 = About 3 hours, 6 = About 4 hours, 7 = About 5 hours, and 8 = 6 hours or more).

Parental support was measured with five questions. The questions regarded information about concern and kindness, discussions about personal matters, guidance about school matters, guidance about other matters (subjects) of theirs, and assistance about variety of matters. The questions regarding parental support were measured on a four-point scale (1 = Extremely difficult, 2 = Rather difficult, 3 = Rather easy, and 4 = Extremely easy). The questions were computed into one variable and named parental support. Cronbach´s alpha for the questions was acceptable ($\alpha = 0.87$). After recoding the variable parental support, it took value on the scale 0 – 15, where 0 stood for little support from parents and 15 stood for very much support from parents.

Procedure

This research is based on the survey *Youth in Iceland 2016* which was conducted by ICRSA in February of 2016 (Guðmundsdóttir et al., 2016). The survey was carried out by sending questionnaires to all lower secondary schools in Iceland. The questionnaires were presented on the same day in all schools in the country. The teachers of each class presented the questionnaires to the students. Those students present in class the day the questionnaires were presented participated in the research. When students had finished answering the questionnaire they were asked to put their answers in an unmarked envelope. Participants were given information about not marking the envelope with their name or social security

number to prevent that answers could be traceable to a specific participant. Participants were asked to answer the questions to the best of their ability and were also told to ask the teacher for assistance if they needed help answering specific questions. The total response rate nationwide was 86% (Guðmundsdóttir et al., 2016).

Design and data analysis

The research design was a quantitative cross-sectional research that reflects well on the whole population. The independent variables used were time spent on social media per day which was measured on an eight-point scale and gender, measured on a two-point scale, those who did not specify their gender did not qualify for participation. During data processing time spent on social media was split into three groups (1 = Under 1 hour per day, 2 = 1 – 2 hours per day, 3 = 3 hours or more per day). The dependent variable was adolescents´ self-esteem. The control variable used was parental support.

The statistical program SPSS version 24 was used to process the data. Descriptive statistics for the dependent variable were analysed as well as the distribution for the variable examined. A factorial analysis of variance (FANOVA) was used to examine if there was a mean difference in adolescence by time spent on social media per day and gender. A factorial analysis of variance with a covariation variable (FANCOVA) was used to examine if parental support buffered the relationship between self-esteem and time spent on social media per day or gender. Multiple regression analysis was done to further analyse the relationship between the variables.

Results

There was not an equal distribution in answers for adolescents' self-esteem (see figure 1). More participants reported having high self-esteem rather than low self-esteem. The distribution of answers for adolescents' self-esteem was positively skewed, *skewness* = .645 (*SE* = .056), *kurtosis* = -.378 (*SE* = .112).

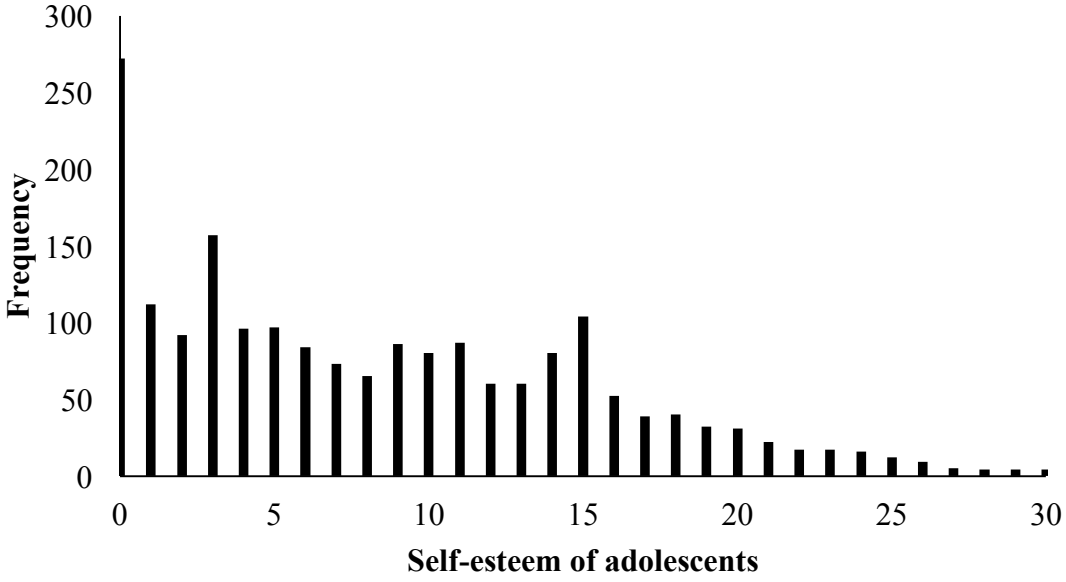

Figure 1. Distribution in answers for adolescents´ self-esteem.

The range of self-esteem scores were 0 – 30 (M = 8.36, SD = 6.93).

Girls, on average, had lower self-esteem (M = 9.91, SD = 7.34) than boys (M = 6.70, SD = 6.02). Those who spent one hour or less on social media per day (M = 6.51, SD = 5.98) had higher self-esteem than those who spent 1 – 2 hours on social media per day (M = 7.71, SD = 6.67), those who spent 3 hours or more on social media per day had the lowest self-esteem of the three groups (M = 10.16, SD = 7.32).

There was a significant mean difference in boys' and girls' self-esteem if time spent on social media per day was under 1 hour, 1 – 2 hours per day, and 3 hours or more (all ps < .001).

Results from factorial analysis of variance (FANOVA) showed that there was a significant main effect of gender on adolescents' self-esteem, F (1, 1889) = 69.60, p < .001, ω^2 = .017, where boys (M = 6.70, SD = 6.02) had higher self-esteem than girls (M = 9.91, SD = 7.34).

There was a significant main effect of time spent on social media on adolescents´ self-esteem, F (2, 1889) = 30.52, p < .001, ω^2 = .015. Bonferroni post hoc test revealed that

adolescents´ self-esteem was significantly lower when time spent on social media was 1 – 2 hours per day compared to under 1 hour per day ($p < .008$), and also when time spent on social media was 3 hours or more per day ($p < .001$). Those who spent 3 hours or more on social media per day had significantly lower self-esteem than those who spent 1 – 2 hours on social media per day ($p = .001$). When time spent on social media got higher self-esteem became lower.

There was a significant interaction effect between the time spent on social media and gender on adolescents´ self-esteem, F (2, 1889) = 3.71, $p = 0.025$, $\omega^2 = .0013$ (see figure 2). These result indicate that time spent on social media had a different effect on boys and girls. When time spent on social media was under 1 hour per day girls ($M = 8.08$, $SD = 6.78$) had lower self-esteem than boys ($M = 5.72$, $SD = 5.30$). The same applied for spending 1 – 2 hours on social media per day (girls, $M = 8.53$, $SD = 7.06$; boys, $M = 6.68$, $SD = 6.02$) and for spending 3 hours or more on social media per day (girls, $M = 11.62$, $SD = 7.38$; boys, $M = 7.88$, $SD = 6.60$).

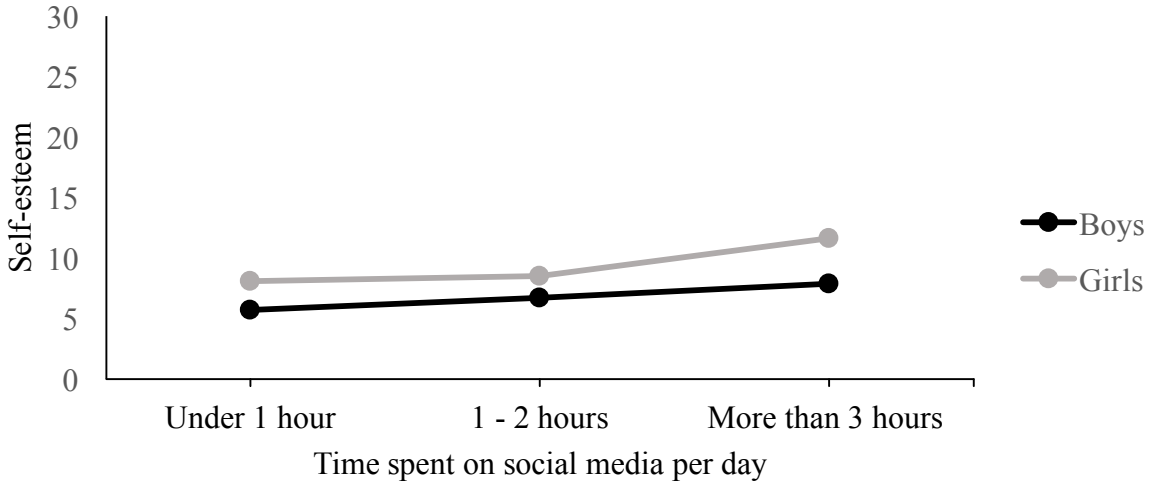

Figure 2. Interaction effect between time spent on social media and gender

Factorial analysis of covariance (FANCOVA) was conducted to see if parental support would change the relationship between gender, time spent on social media and

adolescents´ self-esteem. When controlling for parental support adolescents´ self-esteem changed however the change was minimal (see table 1).

Table 1

Mean, standard deviation and participants with self-esteem as a dependent variable before and after controlling for parental support

		Before parental support			After parental support		
	Social media	*M*	SD	N	*M*	SD	N
Boys	1 hour or less per day	5.72	5.30	337	5.70	5.32	331
	1 – 2 hours per day	6.68	6.02	287	6.67	6.03	286
	3 hours or more per day	7.87	6.60	289	7.88	6.65	284
	Total	6.70	6.02	913	6.69	6.05	901
Girls	1 hour or less per day	8.08	6.78	170	8.08	6.78	170
	1 – 2 hours per day	8.53	7.06	350	8.51	7.04	348
	3 hours or more per day	11.62	7.38	462	11.58	7.39	462
	Total	9.91	7.34	982	9.91	7.34	970
Total	1 hour or less per day	6.51	5.94	507	6.51	5.96	501
	1 -2 hours per day	7.70	6.67	637	7.68	6.67	634
	3 hours or more per day	10.18	7.32	751	10.15	7.33	736
	Total	8.36	6.92	1895	8.34	6.93	1871

The results showed that parental support was significantly related to adolescent´ self-esteem, F (1, 1864) = 444.26, $p < 0.001$, $\eta^2 = 0.192$. When controlling for parental support there was still a significant main effect of gender, F (1, 1864) = 104.60, $p < 0.001$, $\omega^2 = 0.03$, and time spent on social media, F (2, 1864) = 695.95, $p < 0.001$, $\omega^2 = 0.0009$.

However, when controlling for parental support there was no longer a significant

interaction effect between gender and time spent on social media, the interaction became marginally significant, F (2, 1864) = 2.64, p = 0.072, ω^2 = 0.0008. This indicates that when controlling for parental support time spent on social media did not effect on boys and girls differently.

Multiple regression analysis was used to see if time spent on social media and parental support predicted something about self-esteem in adolescence. Two different models were analysed, one for boys and another for girls (see table 3).

Table 3

Linear model of predictors of adolescents´ self-esteem, with 95% bias corrected and confidence intervals reported in parentheses

Boys	b	SV	β	p
Constant	2.937 (2.143 – 3.730)	.404		$p < .001$
Time spent on social media	.361 (.172 – .549)	.096	.114	$p < .001$
Parental support	1.007 (.876 – 1.138)	.067	.460	$p < .001$
Girls				
Constant	4.475 (3.416 – 5.534)	.540		$p < .001$
Time spent on social media	.685 (.469 – .901)	.110	.182	$p < .001$
Parental support	1.035 (.892 – 1.178)	0.073	.416	$p < .001$

Multiple regression analysis showed that time spent on social media and parental support accounted for 22.9% of the distribution within self-esteem for boys (R^2 = .229, F (2, 829) =

124.244, $p < .001$) and 22.6% for girls ($R^2 = .226$, F (2, 920) = 135.402, $p < .001$). In table 3 the coefficients for the predictors is shown by gender. Parental support is a good predictor for adolescents´ self-esteem. Little support from parents resulted in lower self-esteem levels for boys compared to girls. However, spending more time on social media resulted in lower levels of self-esteem for girls in comparison to boys.

Discussion

The main purpose of this research was to examine if there is a gender difference regarding self-esteem in the Icelandic population and also to assess if there was a relationship between spending great amount of time on social media per day and adolescents´ self-esteem. The results showed that girls had lower levels of self-esteem than boys which supports hypothesis 1. These results are in line with findings from previous research (Birndorf et al., 2005; Bleidorn et al., 2015; Sprecher et al., 2013; Zuckerman et al., 2016). The results also showed that those who spent the most time on social media per day had the lowest levels of self-esteem. Those who spent one hour or less on social media per day had the highest levels of self-esteem and those who spent over three hours on social media per day had the lowest levels of self-esteem. These results are similar to those of Vogel et al. (2015) and Hawi & Samaha (2016) which showed that spending more time on social media or being addicted to social media can result in more social comparison orientation thus resulting in lower levels of self-esteem. Woods & Scott (2016) stated that 90% of adolescents are active on social media day and night. This can lead to more social comparison between adolescents which may lead to worse psychological functioning (Lindner et al., 2012). Adolescents that show more upward social comparison have shown lower levels of self-esteem (Cramer et al., 2016). Furthermore, the results showed that girls who spent three hours or more on social media per day had the lowest levels of self-esteem which supports hypothesis 3.

Another goal of the research was to show that examine if parental support buffered

the relationship between social media use and self-esteem in adolescents. When controlling for parental support the relationship between gender, social media use and self-esteem did not change greatly which does not support hypothesis 4. It might be that social media is more powerful than parental support thus making it difficult for parents to buffer the relationship between social media use and self-esteem. These results are not consistent with previous research which indicated that high levels of parental support can boost adolescents´ self-esteem (Boudreault-Bouchard et al., 2013). Furthermore, when controlling for parental support it was revealed that social media use had different effects on boys and girls. Moreover, the results showed that if boys felt like they received little parental support that resulted in lower levels of self-esteem for boys in comparison to girls, and spending more time on social media resulted in lower levels of self-esteem for girls which further supports hypothesis 3. This shows that receiving parental support is important for adolescents, and that receiving parental support can have a positive influence on adolescents (Bean et al., 2003; Rueger & Malecki, 2011).

Previous research seem to be in agreement regarding the gender difference in self-esteem (Birndorf et al., 2005; Bleidorn et al., 2015; Sprecher et al., 2013; Zuckerman et al., 2016). However, there is some disagreement regarding the influence of social media use on self-esteem. Some say that social media has a bad influence on self-esteem (Hawi & Samaha, 2016; Vogel et al., 2015), and others state that it can have a positive effect on self-esteem (Hamm et al., 2014; Sanfilippo, 2015) and even reduce social anxiety of those with low levels of self-esteem (Joinson, 2004). Nevertheless, social media sites seem to be prominent in the world today when looking at research regarding social media use (Andreassen et al., 2017; Hawi & Samaha, 2016). There is conflicting evidence regarding the relationship between social media use and self-esteem in adolescents. There are other factors that could be influential like those who spend more time on social media might be different compared to

those who spend less time on social media. When measuring activity (compared to screen time) the measurement involves a big part of people's lives which can influence a lot of different factors.

Strengths of the current research are that this was a cross-sectional study and was presented to the whole population. From the population a sample was drawn which reflects well on the population and is generalizable to similar populations. The genders were equally represented with a high response rate. Self-esteem was measured with the Rosenberg self-esteem scale which has been shown to have acceptable reliability and validity. Another important strength is that anonymity was guaranteed by informing students not to write their social security number or name on the envelopes containing the questionnaires.

There were also some limitations to the study. It can be difficult to account for the exact influence gender and time spent on social media per day has on self-esteem in adolescents. When working with a sample size of this magnitude the results can show influence that would not be present in a smaller sample. Furthermore, it is difficult to account for which social media sites or apps influence self-esteem because there is a lack of research in that field. Another limitation is that a causal relationship cannot be established.

Whereas the emergence of social media is recent, there is lack of research in that field. It would be interesting to analyse different social media sites or apps separately to see if those sites have different effects on self-esteem in adolescence. The most common social media site looked at is Facebook and the influence that can have on various constructs, however, there is so much development in new sites such as Snapchat and Instagram and those sites have not been researched enough regarding the influence it can have on adolescents. Additionally, it would be interesting to look at bullying in connection to social media and self-esteem. A lot of social media sites can be very discrete and thus making it easier to post or send comments to individuals anonymously, thus indicating that parental

supervision regarding activity on social media is important.

The results of the research regarding parental support indicated that parental support is more important for boys´ self-esteem than girls whereas they showed lower levels of self-esteem if parental support was reduced. Future research should further look at that relationship to establish where the difference is. Could it be that having parental support is not as important for girls or might it be that other construct such as social media is just stronger regarding influence on self-esteem. It might be that parental support and parental monitoring is just different for boys and girls. Possibly social media is mediated through some other constructs, could it be that adolescents are spending time on social media rather than doing exercise or participating in sports or other constructive activities, thus resulting in lower levels of self-esteem.

For further research it might also be interesting to look at the impact social media can have on the various psychological functioning of adolescents such as depression and anxiety. It might also be interesting to look at the influence within clinical groups to see if the negative influence social media can have on psychological functioning is worse for those groups than for the general population.

It seems as though that social media sites and apps are the future and thus it is important to further research the influence that time spent on social media can have on adolescents. Moreover, with social media being so discrete it is important to activate parents in supervision regarding their children social media use.

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