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Depressed adolescents' positive and negative use of social media

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Abstract

This qualitative study examined descriptions of social media use among 23 adolescents (18 female, 5 male) who were diagnosed with depression to explore how social media use may influence and be influenced by psychological distress. Adolescents described both positive and negative use of social media. Positive use included searching for positive content (i.e. for entertainment, humor, content creation) or for social connection. Negative use included sharing risky behaviors, cyberbullying, and for making self-denigrating comparisons with others. Adolescents described three types of use in further detail including "oversharing" (sharing updates at a high frequency or too much personal information), "stressed posting" (sharing negative updates with a social network), and encountering "triggering posts." In the context of treatment, these adolescents shifted their social media use patterns from what they perceived as negative to more positive use. Implications for clinicians counseling depressed adolescents on social media use are discussed.

Keywords

Adolescent; Depression; Social media; Technology

1. Introduction

Adolescent social media (SM) use is pervasive, and almost universal among US adolescents (Common Sense Media. Social Media, Social Life: How Teens View Their Digital Lives, 2012). A 2014–5 sample of US adolescents interviewed by Pew Research Center reported frequently using a variety of SM sites (Lenhart). Given growing concerns about SM use contributing to psychological distress (Sampasa-Kanyinga & Lewis, 2015), better understanding how depressed adolescents use SM is important to informing guidance on its use in their population. The characteristic which has most commonly been studied in

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Conflicts of interest

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relation to psychological distress has been frequency or amount of use. More frequent use of the internet has been associated with negative psychological well-being (Huang, 2010). Compared to their non-depressed peers, depressed adolescents use the internet more frequently (Ybarra, Alexander, & Mitchell, 2005). With regard to SM specifically, adolescents who experienced high levels of psychological distress, unmet mental health needs, and suicidal ideation were more frequent users of SM (Sampasa-Kanyinga & Lewis, 2015) such as Facebook (Hong, Huang, Lin, & Chiu, 2014). This relationship appears to vary with age as a study of older adolescents with mostly low frequency users (less than 2 h a day) found no relationship (Jelenchick, Eickhoff, & Moreno, 2013) while another study in young adults with many high users did find a relationship (Lin et al., 2016) between distress and amount of social media use. A European study found potential developmental differences where heavier use in younger adolescents was associated with internalizing symptoms, while in older adolescents, heavier use was associated with more offline social competence (Tsitsika et al., 2014).

The metric of frequency of use is limited in its inability to describe in what ways SM is used; for example an adolescent who frequently uses SM to send personal messages to close friends may be different from an adolescent who scrolls through status updates for hours in a less goal-oriented way. Studies which explored what depressed adolescents do online found they may be more likely to experience online peer victimization (Frison, Subrahmanyam, & Eggermont, 2016), cyberbullying (Rose & Tynes, 2015), make online friends with strangers and display risky behaviors online (Ybarra et al., 2005). Conversely, some depressed young people experienced a positive outcome using SM after they gained social support by disclosing their depressive symptoms to others (Moreno et al., 2011). Adolescents themselves seem to have conflicting views on the effects of their SM use; those adolescents who categorize themselves as the “least happy” said that SM makes them feel more popular and less shy while also making them feel less confident, worse about themselves, and more depressed (Common Sense Media. Social Media, Social Life: How Teens View Their Digital Lives, 2012).

Understanding the mechanisms behind how emotional states may be linked with SM use and vice versa may require a more thorough investigation than a cross-sectional survey would provide. In particular, attention to how and for what purpose SM is used (C. Morgan & Cotten, 2003) may provide insight into how depressed adolescents can use SM in a more positive way with less likelihood of negative mental health consequences. Using in-depth qualitative interviews with adolescents with depression, we explored their main purposes for using SM. We identified examples of times adolescents felt their SM use was positive and times it was negative, and asked adolescents to reflect on whether the negative experiences with SM adversely affected their mood. We also assessed, from the adolescent’s perspective, how their engagement in mental health treatment had resulted in changes in their SM use. Identification of the multiple purposes of and contexts for SM use among adolescents with depression may provide clinicians with strategies to promote more positive and pro-social uses of SM with their patients.

2. Method

2.1. Study participants and setting

As part of a larger study on adolescent depression, a convenience sampling strategy was used to recruit adolescents (ages 13 to 20) diagnosed with depression and currently receiving treatment. From July 2013 to September 2014, potential participants were informed about the study by clinicians treating patients for depression at two sites: (1) an academic adolescent and young adult medicine clinic with mental health services available or (2) at a specialty psychiatric clinic for adolescents with depression and suicidality. Of 31 adolescents who filled out an interest form about the study, 8 were not able to be reached for interview, so that 23 adolescents completed the study.

2.2. Data collection

All interviews were conducted by the first author who introduced herself to adolescents as a researcher and physician in Adolescent Medicine. Semi-structured interviews were conducted over telephone (N = 17 adolescents) or in-person in a private patient room at the clinical setting (N = 6 adolescents). Verbal consent was obtained from parents and assent from adolescents or consent if 18 and older. The interviewer assured participants the research team would guard confidentiality, specifically not sharing phrases said online which could be potentially searched to identify them (Moreno, Goniu, Moreno, & Diekema, 2013).

A 30–60 min semi-structured interview was used to obtain information about SM use characteristics, and positive and negative experiences with SM use (Appendix), with questions about how type and extent of SM use varies with mood generally more open-ended. Adolescents were also asked demographics including age, gender and race they identified with, length of depression treatment, cell phone ownership, and primary device for internet use. Questions on SM use characteristics were adopted from Pew research center studies on adolescent online behavior (Lenhart; Madden et al., 2013). Adolescents received a book about adolescent depression as compensation for study participation (Dequincy & Brent, 2008). The study protocol was approved by the University of Pittsburgh IRB.

2.3. Data analysis

The interviews were audiotaped, transcribed verbatim removing any participant identifiers, and coded using ATLAS.ti version 7 (Scientific Software Development GmbH, Berlin). The approach of qualitative description as described by Sandelowski (Sandelowski, 2000) - a comprehensive summary of phenomena while staying close to the data - was used to describe adolescent behavior and experiences regarding SM use. Using a content analysis approach (D. Morgan, 1993), the first four interviews were reviewed independently by two investigators using an initial codebook based off of the interview script. An updated list of codes focusing on key areas of interest was generated with additional review by a senior member of the research team. Subsequently, the rest of the interviews were coded by one investigator and then reviewed by the first author who made additions and/or changes. Additions of new codes or changes in code definitions were determined via consensus among the research team. No new sets of codes emerged after approximately nine interviews were completed, suggesting content saturation was achieved. Final sample size was

determined by content saturation as well as achieving at least 5 males in the sample as male adolescents are known to have different SM use than females (Lenhart).

3. Results

The major coding categories included: demographics and SM use characteristics, positive and negative experiences using SM, how use of different SM sites varied, SM and mood, "oversharing" defined as sharing too much or inappropriate content, "stressed posting" defined as sharing a post made as a reaction to stress, "triggering posts" defined as posts which serve as a stimulus for a negative emotional response due to a negative and sometimes traumatic experience with the topic being posted about, and peer interaction with other depressed peers.

3.1. Sample characteristics

The sample consisted of 23 adolescents, with a mean age of 16 (sd = 2.3) (Table 1). Most were female (N = 18) and Caucasian (N = 20). All owned a cell phone and used it to go on the internet. This depressed adolescent sample had similar patterns of SM use to a 2014–5 Pew national adolescent sample with some notable differences (Lenhart). Almost all reported using SM (N = 22), while in the Pew sample 76% used SM. The most commonly used sites for this group of depressed adolescents were Facebook (N = 10), Tumblr (N = 4), Twitter (N = 4), and Instagram (N = 4). Tumblr and Twitter were less popular in the Pew sample, with only 3% and 6% respectively reporting it as their most used SM site. The sample of depressed adolescents in our study had a much larger network of Facebook friends (460 vs. 145 in a Pew sample from 2012) (Madden et al., 2013). Half of our sample were friends with strangers (55% vs. 33% in the Pew sample) (Madden et al., 2013). Most of our sample (71%) was Facebook friends with a celebrity, musician, or athlete versus 30% of the Pew sample.

3.2. Social media use purpose, positive and negative experiences

> "Teenagers these days don't really express their feelings. Like, everything's always done over social media."
>
> – ID 8

This ubiquitous adolescent use of SM was evident in the variety of purposes described. Adolescents described using SM to search for specific information or content such as entertainment news or humorous posts, and more generally for the purpose of distraction. One adolescent liked not missing news on friends and celebrities and described that SM:

> "keeps you updated on like day-to-day lives of your friends and celebrities. And popular things that are going on."
>
> – ID 10

Several mentioned following or creating "fandoms" on Tumblr where they would post and interact with others online about a specific TV show or music group. Adolescents also used SM for planning future events like live meetings with friends or attending concerts. Almost all adolescents described using SM for social connection with family and friends, especially

those who have moved away and were more difficult to stay in touch with. Creative content use like looking at and posting photos was frequently mentioned by adolescents especially when using the popular site, Instagram. They would share song lyrics from favorite bands or create humorous videos on sites like Vine, YouTube, and Gifboom.

Others described how their mood would improve by positive experiences they had using SM. One adolescent whose mood would become worse when she had conflicts with her parent regarding the parent not accepting her gender identity was able to find acceptance online:

> "That made me feel good because I was like, 'Well, someone [online LGBT community] agrees with me.' And I was like maybe my parents don't agree with me, but they do."
>
> – ID 3

Another described using positive quotes and images found on SM to help with a low mood:

> "And when I'm in something low, I go and I put on Nirvana, and I look at happy quotes, and I look at happy things, and I'm just like, 'I don't even want to think about the low part. I just want to be higher than what I am.'"
>
> – ID 3

Others described their experiences finding social support from others online who also had experienced mental health problems especially on the SM sites Reddit and Tumblr where users can form communities based on shared interests such as depression or suicidality:

> "I guess, it would be this post about how I was feeling suicidal and I explained why in a post, and some person who wasn't following me on Tumblr, and I wasn't following, kind of left a response to it, you know, saying that things…things will get better. And you just gotta wait and give it time—I can't exactly remember, so I'm kind of paraphrasing this, but I assume that person searched one of the tags that I posted on either suicide thoughts, depression, self-harm, anxiety, sadness, any one of those. They were searching that specific tag, or a group of tags or whatever, and I guess that's where this person saw my post and replied to it."
>
> – ID 9

Adolescents also described negative experiences – especially themselves or others sharing attention seeking posts (e.g. suggestive pictures, smoking, drinking, inappropriate clothing, sneaking out, videos of fighting) with the purpose of being noticed or comparing themselves to others. One adolescent described her risky online behavior:

> "And I was just trying to imagine, like if my dad read all my Facebook messages, I don't know what I'd do. Like I have them going back to when I was like 13. Like there were definitely some stuff on there that he would not be happy about.
>
> Interviewer: What kind of stuff would that be?
>
> Just dumb decisions that I used to make. Stuff with guys or stuff with friends that I shouldn't have been doing and have outgrown by now. I guess maybe some drug and alcohol use and self-medicating. Things he definitely would not appreciate reading from guys."

– ID 5

Adolescents shared they experienced difficulty abstaining from SM use, spending longer on SM than intended, and craving more Twitter followers:

> "I ended up like getting followers instantly. And my friend didn't, and she ended up like not going on Twitter anymore, and I just stayed on it because I kind of got addicted to it. I didn't want to, it just happened."

– ID 28

Several adolescents remarked about using SM for social approval and for social acceptance, also to compare themselves with others. Adolescents felt that activities such as "checking for likes" could affect their self-esteem by turning likes into a unit of comparison with others for popularity so that getting more likes would increase self-esteem, but not getting likes would decrease it. Feeling the need to get this recognition would motivate adolescents to put up posts they were less comfortable with such as suggestive pictures. One adolescent described this double-sided experience with likes:

> "when you get all those likes and everything, that's going to make you feel good, but then the second you don't get, I don't know, whatever, 16 likes on your picture, that's going to make you feel bad"

– ID 5

One adolescent described how AskFM, a social media site where everyone but the poster can remain anonymous would lead to cyberbullying directed at vulnerable individuals which may include those who are depressed or have "issues":

> "Basically [on AskFM] anyone can ask me a question or tell me how they feel about me. And they can do it anonymous or un-anonymous. And I think that some people just post…like, they know that people have issues and they put stuff on there that triggers it. And I think that they do it on purpose."

– ID 8

3.3. Social media use and mood

Adolescents were asked if they use SM differently when in a bad mood or feeling depressed. Responses were fairly evenly split. Some remarked that they look at SM less because they are less interested in general, they want to avoid talking to others, they don't want to make their bad mood worsen someone else's mood, they want to avoid risky behaviors (e.g. online arguments), and they feel worse seeing others' positive or overly negative posts. Examples were given of feeling worse realizing others are having a good day and they are not, seeing others spend time, share inside jokes, or have planned fun events without them, and seeing others' happy relationships or getting many likes on their post or picture.

> "Because when I'm sad, the last thing I need to know is how much fun other people are having or how great other people are having it. Or other people's situations. That doesn't really help my own mood."

– ID 14

Several adolescents were frustrated by the tendency to compare themselves to others when on SM. This would tend to happen unintentionally. Other adolescents remarked when in a bad mood, they looked at SM more often to use for distraction (e.g. celebrity pages), to look for positive (e.g. happy quotes) and/or humorous content, to complain or "go on a rant," or because they wanted to avoid talking in person. Sometimes seeking SM out to improve mood would lead to unintended consequences like social comparison:

> "Like sometimes I still go on Twitter when I'm upset because it just want to see what's going on, but mostly I just get jealous of other people's lives."
>
> – ID 14

Adolescents were explicitly asked if they post status updates or pictures when stressed, anxious, or in a bad mood and whether doing so seemed to help their mood. This online activity of "stressed posting," as well as "oversharing," and "triggering posts" were three problematic SM phenomenon which emerged in many of the interviews sometimes as a result of adolescents attempting to cope with a bad mood but then suffering untoward outcomes (described below).

3.4. Stressed posting

"Stressed posting" or posting a negative thought such as frustration or anger was viewed as a way to get feelings off one's chest in the form of online journaling; this could help with restructuring a thought after viewing it online. One adolescent described an online friend who would often post his negative thoughts:

> "There's this one kid and he always used to post like, 'I hate my life and I should just end things now.' And, like things like, 'I'm going to hell,' or, just really negative, scary things."
>
> – ID 26

It could also be used to passively seek social support. For example an adolescent could share a song lyric about being unhappy or having relationship difficulties instead of directly stating the reason for the post. One adolescent described using Twitter to post a vague negative tweet and in return receiving messages of social support:

> "If I would to post, 'This is the worst day ever.' And then they would tweet at me and say, 'Are you okay? Text me if you need anything.'"
>
> – ID 1

This technique could be used as an efficient call for help from a wide net of potential supporters. When asked why she engaged in this behavior, the adolescent quoted above suggested:

> "I don't know if it helps me like just get the weight off my shoulders because I've been thinking about it all day, and then just posting that. I don't know. Made you feel relieved. Because I know that my friends do see it. So then, like they all have one. So by them seeing that, then maybe they'll all talk to me."
>
> – ID 1

Some adolescents commented on negative consequences of stressed posting such as cyberbullying, judgment or misinterpretation by others, embarrassment, unwanted attention from family or online friends they do not feel close with, making others feel worse, worried, or uncomfortable, and losing confidentiality. For example, one adolescent described how she is motivated enough to "stressed post" or "rant" to a social network as opposed to in a journal because she may receive some actual or perceived (i.e. no one comments) social support regardless of the risk of cyberbullying or being "attacked":

> "A lot of people will say, 'Oh, if you feel mad write a letter and rip it up.' I can't do that. I would rather rant and have someone see it—because it makes me feel better. Even if no one cares, as long as it's public, I feel better about it. —it's like something I can post, and someone can say something about it, like their opinion, and in a way it kind of helps me. I did say before how I don't really like people who put their opinions, especially if they're attacking me, but if it's an opinion where they're agreeing with me, or they're just saying, 'Oh, maybe you shouldn't do that' and then they're just trying to help me. I like that."
>
> – ID 28

3.5. Oversharing

"Oversharing" was described as posting trivial events, suggestive photos (i.e. sexy outfit, drinking), or exaggerating positive events. Some condoned this behavior as a norm, especially on certain sites; adolescents felt compelled to share anything about their day to day activities or feelings through short "tweets" on Twitter or pictures on Instagram. They enjoyed this unrestricted ability to share as a freedom.

One adolescent described taking almost random pictures and posting them on Instagram:

> "I literally will walk around, take a picture, and post it. Literally, I don't care what it is. I know my last picture that I posted on Instagram, I think, pretty sure it was one of my band t-shirts. Like literally, like, I'll take a picture of my band t-shirt, and I'll put it on Instagram. I'll be like, 'Look at the new shirt I got.'"
>
> – ID 3

Other adolescents described their online friends' habits of oversharing as narcissistic, mundane, irritating, or problematic due to privacy and potential misinterpretation. One adolescent described her friends' apparent disregard for privacy concerns:

> "I have two very close friends, female, both 18, and they'll take like these dumb like sink pictures, trying to make their butt look big and post those online. And I'm like, 'You know, like, I don't even have an Instagram. I don't have anything, and I can type in your name and see that because your page is public,' and they just don't care. They won't make it private."
>
> – ID 5

Several adolescents expressed annoyance at oversharing:

> *Interviewer: What do you think about that [others posting "anything they like"], you were just rolling your eyes?*

> "I feel like why does the whole world need to know your business? Like, why do I care if you went…if you went and got a bucket of fried chicken."
>
> – ID 8

Some felt their friends used it for popularity:

> "People use it as publicity and try to become Facebook famous. And then complain about, if there's pictures of themselves half-naked, and complain that people only like them for their body and want them for sex. So it just gets kind of annoying after a while."
>
> – ID 6

Some described how these posts could lead to cyberbullying as even a post meant to be for a specific friend group could be turned into a picture or "screenshot" and made public to a whole school accompanied by derogatory online comments. One adolescent (who described the "sink pictures" above) described a friend who she perceived still seemed to continue to overshare because of the positive effects on her self-esteem despite cyberbullying:

> "I think maybe just for the attention. Even if it's negative attention, it's still attention. Like my one friend who I was talking about who was being bullied through online outlets and in school, when they put her on that website, she didn't even try very hard to get it taken down - some of the comments were like, 'Nice ass,' whatever. Those boosted her ego, and she's kind of a narcissistic person, so I think that's why she left it up."
>
> – ID 5

3.6. Triggering posts

"Triggering" posts were described as those displaying upsetting content such as negative coping like self-harm, disordered eating, or cyberbullying. Adolescents described this content as unsolicited, appearing when searching for information, positive quotes, or social support.

> "I follow this account on Instagram, and it's a band account, and one day the girl took a picture of her arm, and it was all sliced, and there was blood down it, down her arm. And it just hurt me so bad. I was like, 'How could you post something like that?'"
>
> – ID 12

Triggering content would lead to feeling disgusted, disengaging from the SM activity, having increasing urges and engaging in negative coping, or trying to help the person posting the triggering material.

> "They have the whole hashtags, #selfharm, #depression, and I mean like I've came across pictures, and I'll literally go to that person and I'll hit, 'Unfollow and block,' because I don't want to see pictures like that. Because it honestly makes me extremely upset that I have to see pictures like that."
>
> – ID 3

Sometimes adolescents would encounter this content when they were looking for helpful information about depression. One adolescent described how in some ways following another depressed persons' posts was helpful to know they are not alone in their struggles, but at the same time exposed them to triggering content.

> "I felt like it was relatable, because, somebody else is going through what I felt like. So it was nice to see that stuff, and then it didn't make me feel so bad about what I was doing. But then I just kind of realized that's probably not the best path for me to be going down right now, considering that I've already been doing this stuff [self-harm and suicidal thoughts] for a while, and I need to stop."
>
> – ID 6

3.7. Positive coping and changing use over time

Adolescents also described how their use of SM changed as they grew older [from early adolescence to middle and late adolescence] – sometimes from negative use to more positive use:

> "I guess it just affected me more like mentally, and emotionally. But I guess since I'm older now and I know better, I know how to handle it more, I can just say no, and ignore them, you know what I mean? I guess that's how I used to use it differently."
>
> – ID 28

This included refraining from posting about risky online behavior, less interactions with strangers and more with known acquaintances, and increasing privacy settings.

> "Well, I started, like whenever I start looking at other people and if they'll post personal stuff, I think, 'Why would they do that?' I mean, I can see that. Anyone can see that. And then I'm like, 'Well, I did that. Why would I do that?' And I think I matured a little bit. From last year to now. And I started thinking a little more clear. So I realized having social media, it can be fun, but you have to be very responsible with it or it can end very badly."
>
> – ID 12

Also, they learned to reflect on how SM use was interacting with their mood and appropriately change that behavior if it was affecting their mood negatively:

> "If I do see something on it that will make me upset, I'll just exit out and avoid it for like an hour or two of the day, and then I'll go back on and be whatever about it. That's just how I do it."
>
> – ID 28

The purpose of using SM for them changed from using SM while upset for things like "stressed posting" and gaining approval to connecting with others:

> "Back then, Facebook just came out, and it was cool to have 700 friends. And I think the idea was just see how many people you can get to comment on things, see how many people you can get to like on something. I just feel like it's a really

> warped view once you start thinking about things in that kind of perspective. And now I don't really care what strangers' opinions are on my pictures. I really just care what my friends and family have to say."
>
> – ID 5

They also described using SM in a variety of ways which could be categorized as coping strategies including: using SM as a journal or to look at and share positive photos or quotes. One adolescent described using Tumblr as a private blog with no followers to journal online but maintain privacy:

> "Like you can make posts private that you, only you will see it. So you can pretend that you're posting something, but no one's going to see it but your account."
>
> – ID 4

She described how this may help someone cope with their emotions by allowing them to use self-reflection:

> "It just, like if you write a letter to someone and then you write down all your feelings about them, that might make you feel better that they know your feelings… you've put it into words rather than just like ideas and thoughts in your head because if something happens or something doesn't make you feel good, it's not always a fully constructed kind of thought … You might, in your head it might be way out of proportion to what actually happened. And it'll make you realize that it's not actually that bad. You can analyze what you're feeling or whatever it is if you read it over when you're all out."
>
> – ID 4

4. Discussion

In this qualitative study, we used individual interviews with adolescents currently in treatment for depression to understand how they use SM in their everyday lives and in what ways SM use may be related to depressive symptoms. As compared to a general sample, this group included more frequent users of SM with larger friend networks, which has been associated with decreased privacy settings (Madden et al., 2013). Also more of these adolescents' friends were strangers or not known to the adolescent, which is consistent with other studies finding young people with depression use the internet more frequently for online communication especially with strangers (Ybarra et al., 2005). Although these characteristics appear to suggest this group of depressed adolescents would be engaged in more risky online behavior, our interviews found that they used SM for purposes common to other adolescents without depression (Moreno & Kolb, 2012). Mainly these included entertainment, distraction, as a creative outlet, and seeking social connection. They also experienced negative consequences of SM use similar to other adolescents such as cyberbullying and feeling distraught over social comparisons. What may differ is that some of these adolescents, when feeling more depressed, appeared to use more SM in an effort to improve their mood with the goal of gaining social support, releasing emotions, searching for an online community which they can relate to, or even solely for distraction or entertainment. While sometimes these benefits would be realized, at other times depressed

adolescents would instead encounter negative consequences which would inadvertently worsen their mood. These findings help to provide context to conflicting studies to date about the associations of psychological distress and frequency of SM use and suggests that while SM can negatively affect mood, those who already have a depressed mood may use more SM in an effort to improve their mood. We found adolescents engaged in both positive and negative uses of SM. Some of their negative use became more positive as they learned what types of negative consequences could ensue from posting without thinking first. Advantageously, adolescents had many suggestions for how they developed techniques to change SM use from negative to more positive, which provides multiple clinical implications as described below.

Adolescents shared many positive ways they enjoy using SM which may improve a depressed mood including those which are developmentally appropriate – to explore identity, experience independence, and as an effort to gain social support, peer acceptance, and connection. Developing this online identity may help adolescents increase their self-esteem through updating their profiles (Gonzales & Hancock, 2011) or getting positive feedback (Moreno & Kolb, 2012; Valkenburg, Peter, & Schouten, 2006; Williams & Merten, 2008). In one study college students with lower self-esteem gained more benefit from social capital than other students (Ellison, Steinfield, & Lampe, 2007). Adolescents with depression may experience more social benefits through online communication than in person due to anonymity and less worry about privacy and stigma. Specifically they can connect with others who have also experienced mental illness and provide emotional social support through shared hope and decreased feelings of social isolation (Naslund, Grande, Aschbrenner, & Elwyn, 2014). One study found adolescents with depressive symptoms are more likely to experience peer victimization on Facebook, but social support can be a protective factor (Frison et al., 2016). Online social support is even more common and potentially helpful to youth who in real life have low social support, such as sexual minority youth (Ybarra, Mitchell, Palmer, & Reisner, 2015), and those with low friendship quality (Selfhout, Branje, Delsing, ter Bogt, & Meeus, 2009). Importantly, these benefits of social support are lessened when online relationships are parasocial (e.g. one-way connections where only one member shares to the other and not vice versa such as with celebrities) (Min Baek, Bae, & Jang, 2013), which are more common in depressed youth (Ybarra et al., 2005).

As was expected, adolescents also shared ways that their SM use results in negative consequences. These included negative social interactions such as comparing themselves to others and cyberbullying, sharing risky behavior, and posting negative content or using SM for negative ways to cope with mood. Research supports that using SM may lead to holding the belief that others have happier lives (Chou & Edge, 2012); in a longitudinal study of adolescents, the relationship between negative online comparisons was reciprocal with decreased life satisfaction (Frison & Eggermont, 2016). Therefore, depressed adolescents with less life satisfaction may be more prone to negative online social comparisons and this may further worsen their life satisfaction even as these comparisons are unlikely to be based on reality. About 40% of adolescents feel the pressure to curate their profiles, deleting and retaking photos, deleting others' comments, or even entire accounts, to portray themselves in a desired way (Madden et al., 2013). Growing evidence supports that cyberbullying, specifically cybervictimization, is associated with depression (Daine et al., 2013; Rose &

Tynes, 2015; Tennant, Demaray, Coyle, & Malecki, 2015) and with SM use in a dose-dependent way (Sampasa-Kanyinga & Hamilton, 2015b); in addition, cybervictimization may mediate the relationship between SM use and psychological distress (Sampasa-Kanyinga & Hamilton, 2015a). Adolescents use SM to share risky behavior such as sexual and profane language (Williams & Merten, 2008); at times this exposure then translates into real life risky behavior, as is with substance use (Cabrera-Nguyen, Cavazos-Rehg, Krauss, Bierut, & Moreno, 2016).

We identified three frequent themes throughout conversations with adolescents which they perceived as problematic uses of SM: oversharing, stressed posting, and viewing triggering posts. These phenomenon seemed to stem from an initial effort to improve mood but would then result instead in a negative consequence. We defined oversharing as adolescents sharing mundane or private details with their SM network. In our interviews, most adolescents, similar to adults (2012 Global State of Mobile Etiquette and Digital Sharing: Intel Survey, 2012), expressed annoyance at others who overshare and interpreted the act as an effort to increase self-esteem. A few also expressed their tendency to overshare. This tendency in depressed adolescents may have a purpose to improve intimacy with online “friends.” The actual intent of this behavior may relate to self-disclosure which in offline scenarios, increases intimacy and relationship satisfaction (Sprecher & Hendrick, 2004). Some formats of online self-disclosure also may elicit social support and strengthen relationships such as through authoring a blogpost (Ko & Kuo, 2009) or when the self-disclosure is interpreted as authentic (Kim & Lee, 2011; McKenna, Green, & Gleason, 2002). In contrast, online self-disclosure may be interpreted by others negatively and as oversharing when it is done to an extreme, to an inappropriate or too wide of an audience, or in the wrong context. Online self-disclosure, as opposed to offline, is asynchronous, devoid of visual cues, may not be reciprocal, and is at risk for receiving negative attention. This may occur through dispositional attribution, such as if others attach a negative personality trait to an over-sharing person (A Primer on Communication Studies, 2012). Studies have found an intrinsic reward to online disclosure (Tamir & Mitchell, 2012), and for adolescents with depression, this and perceiving the online environment as a safe place to disclose may be particularly appealing (Forest & Wood, 2012). Unfortunately this practice may backfire as inappropriate disclosures lead to less online social approval (Collins & Miller, 1994; Rains, 2014), lower self-esteem (Schwartz, 2014), and the associated communication overload may increase psychological distress (Chen & Lee, 2013).

Stressed posting, which we defined as sharing one’s negative mood online or emotional self-disclosure, may be considered a subtype of oversharing. Many adolescents with depression described stressed posting, sometimes as a way for emotional release or to ask for social support. Offline, writing about emotional experiences such as journaling can improve physical and mental well-being (Pennebaker, 1997). Online, young adults disclosing their depressive symptoms on Facebook may find social support from others (Moreno et al., 2011). This support may be contingent on characteristics of the individual posting, such as self-esteem. One study found individuals with a low self-esteem seemed to reap reward (likes and comments) only for their positive updates as opposed to negative updates and this was the opposite for those with positive self-esteem (Forest & Wood, 2012). Negative posts seem to be emotionally contagious to others, leading to individuals viewing a negative status

on SM feeling negative and in turn posting a negative status themselves (Kramer, Guillory, & Hancock, 2014); in girls this may lead to co-ruminating (Ehrenreich & Underwood, 2016). Adolescents with depression who experience low self-esteem may attempt to share their negativity in an effort to elicit social support from others, but in turn feel worse when they do not receive reward or recognition for this online behavior. Sharing with individuals who have exhibited emotional support to them in the past or writing in a private journal, as suggested by adolescents we interviewed, may be more beneficial.

Lastly, adolescents described viewing triggering posts, or online content which elicited a negative emotional response due to it reminding them of a person, situation, or behavior they desired to avoid. What was most unsettling about this triggering content was that adolescents seemed to encounter it at an unexpected time: when they were using SM for entertainment such as viewing information about a band they like or when in a low mood and searching for supportive information for depressed adolescents. Encountering online pictures of non-suicidal self-injury (NSSI) may lead to its being perceived as a normative behavior (Daine et al., 2013) which can conflict with an adolescent's attempts to discontinue it. Young people have described differing opinions on viewing NSSI online specifically – at times it can act as a vicarious relief for someone trying to refrain from it but at other times can act as a trigger to act on the urge to self-harm (Seko, Kidd, Wiljer, & McKenzie, 2014).

Although adolescents experienced negative consequences of using SM, several learned from these experiences as they matured and underwent treatment. They described positive changes to SM behavior which can serve as practical guidance for other adolescents, parents, and clinicians. They identified and discontinued harmful SM behavior – such as sharing risky behavior online, interacting with strangers, and being involved in negative online interactions. Some recognized using SM to increase self-esteem is ineffective and can actually decrease their self-esteem due to cyberbullying. Also several observed how using SM purposelessly when in a low mood did not seem helpful. On the other hand, purposeful use such as connecting with a supportive friend in a private message, with an online community of other depressed individuals (such as on Reddit or Tumblr), to distract with humorous content, or engage in creative content such as viewing art or quotes reported finding it helpful at those times. Using SM in this purposeful way to connect with friends and family may lead to a decrease in depression (Bessiere, Pressman, Kiesler, & Kraut, 2010) and improved quality of life (Campisi, Folan, Diehl, Kable, & Rademeyer, 2015). Overall, adolescents' perspective on the purpose of SM changed to connecting with others who are known to be supportive.

5. Limitations

This qualitative study explored how adolescents with depression use SM. Attempts were made at the start of each interview to ask adolescents to bring up their SM account on a computer or other device so they could provide examples and opinions on actual SM behavior as opposed to recalled events. Some refused to do this or had technical difficulties; this may lead to these adolescents incorrectly reporting their online behavior or recalling a prior online event. Nonetheless, their perceptions of these events are important to explore. Although the interviewer attempted to create a confidential and comfortable environment,

some adolescents may have been concerned about their confidentiality and restricted sharing their negative online behavior. To circumvent this, questions were also asked about friends' online behavior. As is common with many qualitative studies, the sample size was small. Also the sample was limited to two academic settings and was not ethnically diverse. These may have limited generalizability of the study findings. Nonetheless, content saturation was achieved around the major coding categories as described in the methods (Patton, 2002). This provides confidence that we captured some of the major experiences with SM use among this group of adolescents with depression.

6. Implications

The major strength of this qualitative study is in highlighting the complexity behind the relationship between adolescent depression and SM use. Our findings indicate including characteristics of SM use such as purpose of use and patterns of use (e.g. oversharing, stressed posting) in future quantitative studies may help delineate what type of SM use is associated with psychological distress. Adolescents, and especially those with depression, are high users of SM. Although the rapid advancement of this type of technology may seem overwhelming and untamable, understanding helpful and unhelpful use is necessary so that clinicians may provide proper guidance to young people. Clinicians should consider helping the adolescent to reflect on their use of SM by considering actions which have resulted in negative and positive consequences in the past; this in turn may translate to the adolescent approaching their SM use in a more purposeful and mindful way. Clinicians may want to discourage using SM for the purpose of increasing self-esteem or gaining social support through oversharing or stressed posting. Instead, they may want to encourage young people to use SM with the purpose of social connection with friends who have shown evidence of being supportive in the past, or for content creation and identity exploration. Engaging with adolescents with depression about their SM use in the context of a therapeutic relationship is likely to encourage healthy use while avoiding some of the untoward consequences.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Appendix A. Supplementary data

Supplementary data related to this article can be found at http://dx.doi.org/10.1016/j.adolescence.2016.12.002.

Abbreviations

SM Social Media

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Table 1

Sample demographics and social media use characteristics (N = 23).

	N (%)	M (range)
Gender, female	18 (78)	
Age		16 (13–20)
Race		
Caucasian	20 (87)	
African American	3 (13)	
Length of depression treatment, months		25.4 (3–84)
Use the internet	23 (100)	
Own a cell phone	23 (100)	
Cell phone is a smartphone	20 (87)	
Use internet on a cell phone	23 (100)	
Primary device for internet		
Cell phone	15 (65)	
Tablet	4 (17)	
Computer	4 (17)	
Use social media (SM)	22 (96)	
Frequency of SM Use		
Several times a day	18 (82)	
Once a day	2 (9)	
Several times a week	2 (9)	
Once a week	0 (0)	
Share Personal Video	7 (32)	
Share Personal Photos	22 (100)	
Friends with Strangers	12 (55)	
Most Used Site		
Facebook	10 (45)	
Tumblr	4 (18)	
Twitter	4 (18)	
Instagram	4 (18)	
Other SM sites on which has an account[a]		
Instagram	20 (91)	
Tumblr	10 (45)	
YouTube[b]	7 (32)	
Vine	7 (32)	
Pinterest	5 (23)	
MySpace	3 (14)	
Use Facebook	21 (95)	
# Facebook Friends		460 (50–2000)
Facebook friend with…		
school friend	21 (100)	

	N (%)	M (range)
not school friend	19 (90)	
parent	16 (76)	
sibling	12 (57)	
extended family	18 (86)	
teacher/coach	5 (24)	
celebrity, musician, athlete	15 (71)	
Use Twitter	18 (82)	
# Twitter followers		169 (2–591)[c]

[a]Respondents asked (1) which is most used site and (2) which other accounts they use besides Facebook and Twitter. These self-generated responses may not capture all who actually have an account. Two respondents mentioned Skype, and the following were mentioned once: Google Plus, Reddit, Witty, AskFM, Meetme, Polyvore, StumbleUpon, Kik, Oovoo, Snapchat, LinkedIn, and Goodness.

[b]Some respondents may not have mentioned YouTube if they did not consider it as social media. Others may use YouTube but not have an account.

[c]#Twitter followers recalled by only 15 of 18 respondents who use Twitter.