Supporting Constructive Mental Health Discourse in Social Media

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ABSTRACT

Social media platforms can be used to provide effective support for users with mental health issues. Self-disclosure about mental health on these platforms can lead to social support and community building. However, there are also inherent risks of stigmatization and misuse of platform features for maladaptive purposes, such as to promote eating disorders. To address these issues, it is essential to understand the reasoning and mechanisms of self-disclosure regarding mental health issues. However, this can be quite challenging, given the flexibility and complexity of user interactions on these platforms. For example, users can now share content not only privately or publicly, but also permanently or temporarily. Our initial inquiry with Instagram showed a tendency to co-opt mental health hashtags to increase post popularity. Based on our initial findings, we propose a participatory design study to better understand the motivations and challenges faced by users who disclose mental health issues on Instagram. Findings from this work can guide future designs to improve user experience and provide effective social support.

CCS CONCEPTS

• **Collaborative and Social Computing Systems and Tools**; • **Human-centered computing** → *Social networking sites*;

KEYWORDS

Mental health, social media, participatory design, qualitative methods

1 INTRODUCTION

Recent data shows that over 43 million live with a mental health condition, or 17.9% of all U.S. adults [19]. However, nearly half of those with severe conditions never seek professional help and go on untreated [25], which can lead to a lower standard of living and poor health outcomes. One of the leading reasons for individuals to forgo treatment is the potential social stigma experienced after disclosing their condition [4]. With increased accessibility, many have taken to the depths of the internet to find answers to their questions and connect with others like them, who can understand their experiences. Sharing thoughts, feelings, and experiences with others online has shown to improve well-being [7] and serve as a positive influence in the help-seeking process [4]. This was initially done with topical online health communities, because of the safe spaces they provided [13].

As social media has grown more integrated with our everyday lives, these same mental health discussions have spilled over to other platforms, such as Twitter [5, 12] and Instagram [2, 3, 21]. These new avenues have introduced a wider audience and new obstacles for maintaining a positive environment for discussing stigmatizing topics. For one, the anonymity and distance between users afforded by social media and the internet alike, can lead users to share more and manage how others perceive them [22]. This can have a positive influence on individuals for disclosing their mental health and build a sense of community. At the same time, however, these affordances can help activate the online disinhibition effect [26] and amplify the stigmatizing thoughts and words of others in a mixed audience. Previous work has attempted to understand the trade-offs involved with these sensitive online disclosures and explain the motivations behind sharing, despite the potential negativity, through the public content that users produce. The chance to create a community [2, 7, 21], cope with daily life [5], combat stigma [5, 22, 29], and raise awareness in others [5], are among the desired outcomes that drive this activity for many users.

Instagram, in particular, allows users to self-disclose in a way that is less dependent on text, and instead, express their experience through images [10]. The interactions and self-disclosure through images potentially have very different characteristics compared to text based communication. However, previous studies have mostly focused on platforms that prioritize text-based interactions and cannot fully account for the role that images play in mental health disclosures. Our proposed study on Instagram aims to address this gap. Additionally, we focus on Instagram due to its younger user base. Young Americans, age 18-24 are the leading users of Instagram; 71% of which use Instagram, as compared to 45% that use Twitter [24]. This use has grown over the last few years, despite the use of other platforms remaining constant, with 81% of young users engaging with the platform daily [24]. This same 18-24 age group also coincides with the common onset ages for many mental health conditions [17]. High prevalence disorders, such as anxiety

and mood disorders, typically emerge during adolescence and early adulthood, and research has shown that interventions at this critical period may help reduce the severity or persistence of these conditions [17]. Given this convergence, a better understanding of mental health self-disclosure on Instagram could help provide insight for future interventions focused on reaching this critical demographic.

Towards this goal, we attempt to understand the potential issues faced by users while disclosing their mental health experiences on Instagram. Furthermore, we also explore how different functionalities of the Instagram platform might support the disclosure process and maintain a constructive conversation. Specifically, we look into problematic Instagram use, which uncovers the co-opting of hashtags, promotion of negative behaviors, and negative interactions as common issues faced on Instagram. To continue this, we propose work involving Instagram users in a participatory design approach toward developing more supportive social media platforms. We aim to gather one-on-one insight as to how users employ both private and public features, as well as permanent versus temporary sharing mechanisms, to communicate their experience with others, but also highlight the points where existing systems fail to support their needs. We will use focus groups to explore ways in which new social systems can be designed with embedded support for self-disclosure of mental health issues in mind. This increased understanding can provide guidance in designing social platforms for the purpose of constructive mental health conversations, but also inform existing systems of the ways in which they can help support the needs of a growing group of their users.

2 RELATED WORK

Health disclosure and discourse, particularly for mental health, has been a point of interest across various types of online spaces, from topic-specific online forums to everyday social media use. It has been shown that informational attainment has largely driven participation in these types of online interactions [16, 18]. In particular, four types of information are typically sought from others regarding behavior or lifestyle changes: advice, emotional support, motivation, and social accountability toward their behavioral changes [18]. Typically, work of this nature has focused on the context of weight loss, diabetes management, and other physical health concerns. While seeking information on these topics involves some degree of personal disclosure, it is not paired with the same inherent social stigma that makes mental health conditions more difficult to discuss openly [13]. This adds another layer to what these specific users seek in their online interactions and why.

To seek support and information from others, one must first make the decision to disclose enough about their mental health condition to gather adequate information from others. For this to happen, users need a level of anonymity and a non-judgmental environment [1, 7]. The anonymity and physical distance afforded by some online communication methods gives the user a greater sense of control over their own identity and how they choose to present themselves to others. Users can manage how they are perceived by carefully curating what and how they share with others [14, 15], allowing them to disclose sensitive information on their own terms. Having these affordances in place has shown to increase

disclosure. Andalibi et al. [1], compared anonymous "throw-away" accounts to personal ones and found that anonymity affects the disclosure type, as well as the degree of sensitive information sharing. Additionally, anonymity has shown to increase the likelihood of users directly seeking out information or support from other users, and has shown to have a stronger effect on men than women [1]. Given the types of interactions afforded by different platforms and the influence of social judgment, those who turn to social media to discuss their mental health, likely have a more complex list of needs that motivate their online involvement.

Along with impression management, this increased anonymity enables the disinhibition effect [26]. This effect can be described as a loosening of social restrictions and inhibitions in online communication, which normally remain present in face-to-face communication. While this allows users to feel more at ease disclosing sensitive and personal information, it can also amplify the level of negative and stigmatizing words shared by others when these discussions take place in public spaces, like social media sites. When this type of mental health discussion takes place in general online spaces, without the shared experiences to build a connection between users, social stigma can be a serious challenge. Social media platforms, such as Twitter and Instagram, have very diverse users and an extensive list of discussion topics. This, paired with the ability to easily share posted content with others, provides a much different environment for studying how users choose to talk about mental health.

Joseph [12] and Hwang [11] each have both focused on the use of hashtags and the impact they can have on stigma and the narrative around mental health. From the perspective of clinical psychology, Joseph et al. [12] looked at Schizophrenia, a term that is often used incorrectly within popular culture, and often in a derogatory way. Similarly, Hwang et al. [11] addressed words commonly used on Twitter in a way that stigmatizes mental health. They also investigated whether increased awareness of mental illness could help discourage the derogatory use of these words to maintain a positive environment. Other work has highlighted additional issues for mental health discussions, such as the existence of pro-anorexia sub-communities [29] and topics that produce comments in support of harmful behaviors [3, 21].

Despite these potential negative experiences, the positive benefits of disclosure and discussion seem to win this trade-off for many users. Through analysis of user content, studies have provided a range of motivations behind this continued activity. A Twitter study by Berry et al. [5] noted users were drawn to social media for four leading reasons: building a sense of community, raising awareness and combating stigma, expressing themselves in a safe space, and as means of coping with their condition. Many of these motivations have been echoed in additional research [3, 21].

Instagram and its focus on visual content and a younger user base adds additional layers to self-disclosure. It amplifies the ability for users to carefully curate their self-presentation to others [10]. This is often done to avoid judgment or criticism, even in less stigmatized groups [14]. This provides an opportunity for impression management that is especially appealing to younger users at a critical stage for establishing peer support and approval, as well as their own identities [15, 27]. More applied studies of Instagram use have shown that instances of disclosure are often followed by more

positive, socially-supportive comments, as well as little aggression or support within the community for harmful or pro-disease behaviors [3]. Overall, the act of sharing one's experience with mental health conditions, on Instagram or in other similar communities, helps users to establish a shared identity with others and promotes a sense that no one is alone [5, 7].

The initial work described in this paper attempts to add to this body of knowledge by addressing potential challenges to carrying out constructive and supportive conversations online, using anxiety and depression tagged posts on Instagram. Additionally, a great deal of the mechanisms and motivations behind these mental health disclosures have been studied through only publicly available content. Therefore, the proposed work aims to involve users through participatory design to better speak to their own perspectives on these established challenges, understand their use of private and temporary features for disclosure, and explore new solutions to better support their specific needs in these social activities.

3 INITIAL WORK

To address these potential challenges in mental health discussions, we performed a thematic analysis of Instagram posts. We chose this platform for its unique focus on image content and how the combination of text with images could add to the conversation by allowing users to convey their feelings and experiences beyond textual descriptions.

3.1 Data Collection and Coding

Given the continuous stream of content uploaded to Instagram every minute, we gathered a sample of posts from the platform. We used two keywords as search terms; #depression and #anxiety. We chose these two topics to represent the wider category of mental health, due to their high prevalence within the United States population [19]. Although these two topics may not fully represent all conditions, they relate to a large number of users and generate a significant pool of posts to weigh in on the conversation.

For each search term, we gathered 100 unique posts, 200 posts in total. To reduce the amount of potential bias in the sample, we selected posts from the "most recent" posts, rather than the "most popular" posts. We made this decision because these most popular posts were often part of larger campaigns for mental health awareness or from notable figures, which introduce potential bias. Sample posts for each term were gathered five at a time over three weeks. This was done to reduce the likelihood that the sample was influenced by trending topics or social campaigns active on any particular day. For example, September is suicide prevention awareness month, which affects online discussion and increases the number of posts shared. Because of this, the overall environment could be influenced in a way that does not reflect the norm.

One author coded all posts using mixed open and closed coding. All 200 original Instagram posts were evaluated for: context of word use, mental health disclosure, tone, and photo subject. Following this, any comments attached to these posts were also evaluated along these same categories, whenever relevant. Grounded Theory [8] was used to address details that fell outside the scope of the coding scheme. In doing so, additional content was evaluated iteratively for emerging themes. This process was applied to also address the relationship between the post's photo and text caption. The same text-based coding categories were applied to each post's comments, if any were made. Because the posts were selected for the sample as "most recent", many posts initially showed no interaction from other users. To counter this, posts were revisited within the next week to evaluate the comments section. Though this may have excluded any remarks made on later days, previous work has shown the peak for post interaction to be within three hours of the original post [20].

3.2 Preliminary Findings

Out of this inquiry emerged three prominent themes: the idea of "hashtag hijacking", or co-opting #depression and #anxiety for purposes other than talking about either condition, the promotion of negative behaviors, and interaction mirroring that lead users to produce more self-deprecating comments in response to other negative or self-deprecating posts.

3.2.1 Hashtag Hijacking. We categorized word choice by three different options: clinical, casual, or unrelated. We determined posts to have a "clinical" use if the specific condition, depression or anxiety, was explicitly mentioned or if a condition could be derived from the context of the post, such as phrases like "mental illness", "depressive mood", or "my therapist". The keyword could also be used in a casual sense, such as in place of general feelings of worry or sadness. This was exemplified by one post stating, "Dad took my phone away yesterday. I was so depressed." Lastly, keywords could be used for unrelated or off-topic posts. Posts were considered off-topic if neither the photo, nor the caption included anything overtly about depression or anxiety or provided no related context for such an interpretation.

Though containing the keywords in their hashtags, many sample posts were considered off-topic. The most common form of this was an off-topic photo, including no caption, but a long list of unrelated, high-traffic hashtags. In many of these instances, either #anxiety or #depression was one of over twenty tags, including those like #like4like or #followforfollow. In this case, these hashtags were used to increase the visibility of posts, simply because anxiety and depression are common search words. Also, depression and anxiety tags were often adopted by diet, fitness, and exercise accounts looking to promote blogs or products. These accounts used the same tag listing strategy and made no direct mention of mental health in their post. This same activity carried over to the comment sections, as well. Diet and fitness accounts were also seen commenting on "on-topic" clinical disclosure posts, but to push products such as diet pills or tea, rather than offer support or advice to the author.

Despite their unrelated nature, these off-topic posts provide insight into some of the obstacles to constructive discourse, and guidance for making healthier online spaces. Instances of others trying to push attention to their questionable health products within the comments of anxiety or depression posts could be potentially detrimental for those seeking help, who may be especially vulnerable. However, viewing from the outside only, it is difficult to understand how these interjections affect those who are disclosing.

3.2.2 Promoting Negative Behaviors. Another common occurrence was the adoption of depression or anxiety tags, in place of

pro-anorexia and pro-bulimia tags. This is likely due to how often these types of tags are flagged and removed from social media sites. One post in particular called out this fact, "I changed up my tags this time, so maybe Instagram will stop removing all my posts!" Another user included #depression to a post in search of motivation, "For every like this post gets, I'll go four hours without food." At the time of data collection, the post already had nine likes. At the same time however, it is important to note that eating disorders are often comorbid with depression and anxiety, so users may disclose about both conditions simultaneously [21]. From the user's point of view, the hashtag could be on-topic, but for the sake of this work, these posts were considered unrelated.

Considering the common comorbidity of depression or anxiety with eating disorders, posts and comments promoting negative behaviors could be especially troubling for users who may use Instagram as part of their recovery for either condition. Seeing these types of messages and images while attempting to seek out positive, constructive support from others, could be very distressing and potentially lead to a set back in their progress.

3.2.3 Interaction Mirroring. When looking at the posts and their comments combined, this highlighted a theme of self-focused negativity shared between users. Those who posted highly positive or optimistic messages about themselves received, not only more comments from other users, but overwhelmingly positive and supportive comments. Those who posted self-deprecating messages received little interaction from other users, many showing no comments or likes. When self-deprecating posts did receive comments, they were often negative. This negativity, instead, mirrored the self-deprecating nature of the original post. The negativity was not directed toward the original author, but at themselves. Instead, this could be interpreted as an act of shared experience or commiseration. While this may be intended as an act of social support, it has the potential to negatively impact some users, leading them to disclose less or seek positive support elsewhere, depending on their own goals of the interaction. Leveraging these behavioral patterns in favor of positive sharing, rather than self-focused negativity, could help establish a more positive and supportive environment for disclosure.

4 FUTURE WORK

This initial inquiry provides more insight into the common obstacles for maintaining constructive mental health disclosure and discussion on public internet spaces. This clearly shows that self-disclosure behaviors can be personalized, diverse, and nuanced. However, other modes of communication carried out between individuals on platforms like Instagram are not captured by this public facing approach to content. Users can share content in their public-facing posts, private direct messages, and now a "stories" feature, which allows for temporary content, only viewable to friends or followers. These multiple avenues are not unique to Instagram, but exist across many popular social media platforms. Given these temporal options, it is likely that users employ them for different reasons. In the context of the mental health conversation, the differences in who can view posts and for how long, likely introduces more variability in content across these different sharing options.

To better account for these specific needs and challenges and to address them through design, we need to shift our focus to the users, themselves, and the features that either support or fall short of their needs. For future work, our research questions are:

- How do users describe their needs for disclosing and discussing their mental health experiences on social media platforms?
- How do they adopt the current range of platform features support those needs?
- What needs are left unsupported and how can technology better facilitate this activity?

To address this, we will use participatory design to involve users more directly. More specifically, employing this approach will be helpful in generating ideas for future design, while empowering the users' sense of agency, in what can often be a stigmatizing and isolating health context [6]. Given the high nuance to mental health experiences, these specific users hold crucial insights, beyond the reach of the publicly-available posts alone, and should be leveraged in the overall design process for supportive systems.

This type of approach has been applied the in health domain, involving a range of user groups. For example, Skeels et al. [23] worked with cancer patients, survivors, and their caregivers to explore ways to make the most of existing support systems during treatment and recovery. Additional work of this nature has focused on developing online therapy sessions and other mental health interventions for younger individuals [9, 28].

Most of the previous work with mental health has been used to develop clinical tools to communicate with caregivers or to facilitate or support traditional therapy, meaning that they involve those seeking formal help with mental health conditions and may involve professionals in the resulting systems. Although this work incorporates the users' knowledge and experience of mental health conditions, in general, it does not necessarily speak to how that experience carries over to non-clinical, everyday needs for social support through social media disclosure. By focusing on general social media platforms, we can address the concerns of users who may employ social media support in place of formal help or as a preemptive step before reaching out to a professional for more formal help.

This proposed work would employ both small focus groups and individual interviews to allow for flexibility in accommodating different levels of comfort in disclosing sensitive and personal mental health experiences with a researcher. Using both can help gather a wide array of insights from users, differing both in their condition and habits in social media use. Elements of talk-aloud methods and iterative prototyping could be adopted throughout the course of this work to address how users employ existing features and probe new ideas.

First, interviews will be used as a means to further explore the challenges uncovered in the initial study, better understand how the range of sharing functions, permanent to temporary, are used to share their experiences with others, and uncover points in which social media platforms fail to meet their needs or expectations for mental health discourse. In interview settings, talk-alouds can be used to prompt participants to walk the researcher through their current actions on Instagram, or platforms they use for a

similar purpose, to provide a different perspective on social media disclosure. Participants will have the opportunity to share past posts with the researchers, which can prompt discussion about their motivations or expectations for sharing content with others through the different features provided (e.g., private channels, public posts, or temporary feeds).

These insights will be explored further through focus group discussions concerning common features of social media and the generation of future design concepts. Participants will be encouraged to share their experiences with mental health and technology use, but also to consider new possibilities that would help them better accomplish their own goals online. This will involve brainstorming idea-generation sessions and the development of low-fidelity prototypes for a system specifically for mental health social support. The findings of this work will address the current challenges for online mental health disclosures by leveraging the habits and experiences of these users. By furthering this understanding, we can help guide future design to support constructive conversations and provide new opportunities for intervention.

5 CONCLUSION

Social media platforms can have a positive impact on users regarding their mental health, allowing them to gain social support and build a community of their own, despite physical distances. However, to ensure that these spaces are conducive to productive discourse, their design must closely align with these user's needs and be aware of the challenges that arise in disclosing, often stigmatizing, personal content. Our initial inquiry has shown that there are a variety of challenges that could potentially impact a user's ability to comfortably disclose about their mental health issues, seek social support, or make progress with their own conditions. Given the wide range of features now provided by social media platforms that provide the user more control over how they share information, more involvement from the users is necessary to understand the complex nature of sensitive disclosures. We propose a participatory design approach to better address the issues faced by users and the way they employ different features for social support. Findings from this study can enable better systems that are tailored to provide effective support for mental health issues at a large scale.

REFERENCES

[1] Nazanin Andalibi, Oliver L Haimson, Munmun De Choudhury, and Andrea Forte. 2016. Understanding social media disclosures of sexual abuse through the lenses of support seeking and anonymity. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*. ACM, 3906–3918.

[2] Nazanin Andalibi, Pinar Ozturk, and Andrea Forte. 2015. Depression-related imagery on instagram. In *Proceedings of the 18th ACM Conference Companion on Computer Supported Cooperative work & social computing*. ACM, 231–234.

[3] Nazanin Andalibi, Pinar Öztürk, and Andrea Forte. 2017. Sensitive Self-disclosures, Responses, and Social Support on Instagram: The Case of# Depression.. In *CSCW*. 1485–1500.

[4] Lisa J Barney, Kathleen M Griffiths, Anthony F Jorm, and Helen Christensen. 2006. Stigma about depression and its impact on help-seeking intentions. *Australian & New Zealand Journal of Psychiatry* 40, 1 (2006), 51–54.

[5] Natalie Berry, Fiona Lobban, Maksim Belousov, Richard Emsley, Goran Nenadic, and Sandra Bucci. 2017. # WhyWeTweetMH: understanding why people use Twitter to discuss mental health problems. *Journal of medical Internet research* 19, 4 (2017).

[6] Jane Clemensen, Simon B Larsen, Morten Kyng, and Marit Kirkevold. 2007. Participatory design in health sciences: using cooperative experimental methods in developing health services and computer technology. *Qualitative health research* 17, 1 (2007), 122–130.

[7] Munmun De Choudhury. 2013. Role of social media in tackling challenges in mental health. In *Proceedings of the 2nd international workshop on Socially-aware multimedia*. ACM, 49–52.

[8] Barney G Glaser, Anselm L Strauss, and Elizabeth Strutzel. 1968. The discovery of grounded theory; strategies for qualitative research. *Nursing research* 17, 4 (1968), 364.

[9] Penny Hagen, Philippa Collin, Atari Metcalf, Mariesa Nicholas, Kitty Rahilly, and Nathalie Swainston. 2012. Participatory Design of evidence-based online youth mental health promotion, intervention and treatment. (2012).

[10] Yuheng Hu, Lydia Manikonda, Subbarao Kambhampati, et al. 2014. What We Instagram: A First Analysis of Instagram Photo Content and User Types.. In *Icwsm*.

[11] Jena D Hwang and Kristy Hollingshead. 2016. Crazy mad nutters: the language of mental health. In *Proceedings of the Third Workshop on Computational Lingusitics and Clinical Psychology*. 52–62.

[12] Adam J Joseph, Neeraj Tandon, Lawrence H Yang, Ken Duckworth, John Torous, Larry J Seidman, and Matcheri S Keshavan. 2015. # Schizophrenia: use and misuse on Twitter. *Schizophrenia research* 165, 2 (2015), 111–115.

[13] Lynne Lamberg. 2003. Online empathy for mood disorders. *JAMA* 289, 23 (2003), 3073–3077.

[14] Effie Le Moignan, Shaun Lawson, Duncan A Rowland, Jamie Mahoney, and Pam Briggs. 2017. Has Instagram Fundamentally Altered the'Family Snapshot'?. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*. ACM, 4935–4947.

[15] Eunji Lee, Jung-Ah Lee, Jang Ho Moon, and Yongjun Sung. 2015. Pictures speak louder than words: Motivations for using Instagram. *Cyberpsychology, Behavior, and Social Networking* 18, 9 (2015), 552–556.

[16] Diane Maloney-Krichmar and Jenny Preece. 2005. A multilevel analysis of sociability, usability, and community dynamics in an online health community. *ACM Transactions on Computer-Human Interaction (TOCHI)* 12, 2 (2005), 201–232.

[17] Patrick D McGorry, Rosemary Purcell, Sherilyn Goldstone, and G Paul Amminger. 2011. Age of onset and timing of treatment for mental and substance use disorders: implications for preventive intervention strategies and models of care. *Current opinion in psychiatry* 24, 4 (2011), 301–306.

[18] Mark W Newman, Debra Lauterbach, Sean A Munson, Paul Resnick, and Margaret E Morris. 2011. It's not that i don't have problems, i'm just not putting them on facebook: challenges and opportunities in using online social networks for health. In *Proceedings of the ACM 2011 conference on Computer supported cooperative work*. ACM, 341–350.

[19] National Institute of Mental Health. 2016. US Mental Illnes Statistics. http://https://www.nimh.nih.gov/health/statistics/mental-illness.shtml. Accessed: 2018-03-28.

[20] Sherry Pagoto, Molly E Waring, Christine N May, Eric Y Ding, Werner H Kunz, Rashelle Hayes, and Jessica L Oleski. 2016. Adapting behavioral interventions for social media delivery. *Journal of medical Internet research* 18, 1 (2016).

[21] Jessica A Pater, Oliver L Haimson, Nazanin Andalibi, and Elizabeth D Mynatt. 2016. "Hunger Hurts but Starving Works": Characterizing the presentation of eating disorders online. In *Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing*. ACM, 1185–1200.

[22] Umashanthi Pavalanathan and Munmun De Choudhury. 2015. Identity management and mental health discourse in social media. In *Proceedings of the 24th International Conference on World Wide Web*. ACM, 315–321.

[23] Meredith M Skeels, Kenton T Unruh, Christopher Powell, and Wanda Pratt. 2010. Catalyzing social support for breast cancer patients. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. ACM, 173–182.

[24] Aaron Smith and Monica Anderson. 2018. *Social Media Use in 2018*. Pew Research Center, Washington, DC.

[25] Ruth SoRelle. 2000. Nearly half of Americans with severe mental illness do not seek treatment. *Circulation* 101, 5 (2000), e66–e66.

[26] John Suler. 2004. The online disinhibition effect. *Cyberpsychology & behavior* 7, 3 (2004), 321–326.

[27] Yalda T Uhls, Nicole B Ellison, and Kaveri Subrahmanyam. 2017. Benefits and costs of social media in adolescence. *Pediatrics* 140, Supplement 2 (2017), S67–S70.

[28] Greg Wadley, Reeva Lederman, John Gleeson, and Mario Alvarez-Jimenez. 2013. Participatory design of an online therapy for youth mental health. In *Proceedings of the 25th Australian Computer-Human Interaction Conference: Augmentation, Application, Innovation, Collaboration*. ACM, 517–526.

[29] Daphna Yeshua-Katz and Nicole Martins. 2013. Communicating stigma: The pro-ana paradox. *Health communication* 28, 5 (2013), 499–508.