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Abstract

Online communities and material regarding non-suicidal self-injury (NSSI) and eating disorders (ED) are abundant and easily accessible on the Internet. Internet platforms (e.g., social networks, message boards, blogs, video-, and photo-sharing sites) offer individuals who engage in these behaviors opportunities to interact with others with similar experiences (i.e., who have self-injured or who have ED difficulties). Researchers have found that although online activities can be positive in a number of ways (e.g., providing support to otherwise isolated individuals), they may be detrimental in others (e.g., contributing to continued and unhealthy self-destructive behaviors). In this chapter, we review extant literature on the potential benefits and risks of online activities related to NSSI and EDs, discuss avenues for future research, and present implications and guidelines for clinicians. We end with a case vignette illustrating the clinical guidelines presented.

16.1 Overview

The Internet has emerged as a highly salient part of many individuals' lives as a means to retrieve information and connect with others; research suggests that this may be especially the case for individuals who experience mental health difficulties (e.g., emotional difficulties), isolation, and stigmatization (Berger, Wagner, & Baker, 2005; McKenna, Green, & Gleason, 2002; Whitlock, Powers, & Eckenrode, 2006). As these issues are often central in the context of non-suicidal self-injury [NSSI; see Klonsky, Muehlenkamp, Lewis, and Walsh (2011)] and eating disorders [ED; see Fairburn and Harrison (2003); Treasure, Claudino, and Zucker (2010)], it is perhaps not surprising that there has been a proliferation of online NSSI and ED

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content and communication on the Internet [for reviews, see Lewis, Heath, Michal, and Duggan (2012); Rouleau and von Ranson (2011)]. Accordingly, researchers have recognized the need to understand the scope and nature of online activities associated with NSSI and EDs as well as the potential impact these may have on those involved. It is important for researchers and clinicians to be knowledgeable within these areas of research. This is conducive to advancing empirical work in these growing fields and addressing these activities in clinical contexts.

16.2 Non-suicidal Self-Injury and the Internet

Growing attention has focused on the scope and nature of online activity regarding non-suicidal self-injury (NSSI). In 2010, the International Society for the Study of Self-injury (ISSS) recognized the importance of research in this area. By 2011, there were over 400 news stories published globally regarding online NSSI activity, most of which focused on the impact this may have on those who access it (Google, 2011; Sornberger, Joly, Heath, & Lewis, 2012). This trend continued well into 2012 with major social networking sites (e.g., Tumblr, Instagram, Pinterest) banning what they referred to as “pro self-harm” material (Google, 2012). With this widespread public attention, research in this area has increased. Indeed, the Internet has emerged as a highly accessible and often preferred vehicle for individuals to communicate about non-suicidal self-injury [for a review, see Lewis, Heath, Michal et al. (2012)].

To date, researchers have examined online NSSI activity on (a) personally made Web sites where individuals chronicle their NSSI experiences, (b) video-sharing Web sites (e.g., YouTube), (c) major social networks (e.g., MySpace, Facebook), (d) discussion forums, and (e) question-and-answer Web sites (which allow users to post and respond to questions on almost any topic). Given the high rates of NSSI, its numerous consequences, and the salience of the Internet as a means to communicate about NSSI, researchers and clinicians need to be aware about the potential benefits and risks associated with such e-activity.

16.2.1 Potential Benefits of Online Non-suicidal Self-Injury Activity

16.2.1.1 Support and Validation

It has been suggested that many individuals who self-injure and who go online to communicate about NSSI feel isolated and stigmatized in their daily offline lives [see Lewis, Heath, Michal et al. (2012)]. Thus, for many individuals, the Internet may offer an anonymous means by which to communicate with others—typically others who also self-injure (Lewis, Heath, St. Denis, & Noble, 2011; Whitlock et al., 2006). To this end, the most widely cited benefit associated with online NSSI activity involves the aspect of social support (Baker & Fortune, 2008; Jones et al., 2011; Lewis et al., 2011; Lewis, Heath, Sornberger, & Arbuthnott, 2012; Murray & Fox, 2006; Rodham, Gavin, & Miles, 2007; Whitlock et al., 2006). Accordingly,

individuals not only receive support from others but they also provide it (Lewis & Baker, 2011; Lewis et al., 2011; Rodham et al., 2007; Niwa & Mandrusiak, 2012; Smithson et al., 2011; Whitlock et al., 2006). Related to this, many youth and young adults who self-injure and who communicate about NSSI via the Internet also do so to obtain validation about their experiences (e.g., to gain a sense that they are not alone) (Baker & Fortune, 2008; Lewis, Heath, Michal et al., 2012; Lewis, Rosenrot, & Messner, 2012; Niwa & Mandrusiak, 2012; Rodham et al., 2007).

16.2.1.2 Non-suicidal Self-Injury Reductions

Reported to a lesser extent is that communicating about NSSI online may, at least in part, associate with reductions in NSSI frequency (Johnson, Zastawny, & Kulpa, 2010; Murray & Fox, 2006; Baker & Lewis, 2013; Lewis, Heath, Sornberger et al., 2012). Preliminary support for this comes from two research approaches. In the first, brief surveys have been administered to members of NSSI e-communities in which respondents indicate that pursuant to joining the e-community, they have self-injured less often (Johnson et al., 2010; Murray & Fox, 2006). In the second, researchers have content-analyzed individuals' online posts within NSSI e-communities; findings from these studies indicate that some individuals upload messages that they have self-injured less often as a result of communicating with others about NSSI online or by accessing online NSSI material (Baker & Lewis, 2013; Lewis, Heath, Sornberger et al., 2012). Notwithstanding these reports, the extent to which online NSSI communication associates with NSSI reductions is unclear, and inferences about this should be made cautiously. Not only are these reports scant, the degree to which online NSSI activity actually yields NSSI reductions is uncertain, as are the forms of online activity that may associate with these reductions and the mechanisms involved in this process.

16.2.2 Risks of Online Non-suicidal Self-Injury Activity

16.2.2.1 Normalization and Reinforcement

The most frequently reported risk associated with online NSSI activity pertains to NSSI becoming normalized and reinforced; that is, through continued online activity, the risk for continued NSSI behavior is exacerbated (Duggan, Heath, Lewis, & Baxter, 2011; Lewis & Baker, 2011; Lewis et al., 2011; Lewis, Heath, Sornberger et al., 2012; Rodham et al., 2007; Whitlock et al., 2006). As described next, online activity may normalize and reinforce NSSI in a number of ways.

Sharing NSSI Experiences. On a variety of online platforms, individuals share their NSSI experiences with others. As noted earlier, this may allow individuals to obtain needed support and validation (see Lewis, Heath, Michal et al., 2012). However, in many cases, individuals describe their NSSI experiences in ways which focus on distress and emotional pain (Lewis, Heath, Sornberger et al., 2012; Niwa & Mandrusiak, 2012); consequently, these messages tend to have melancholic and hopeless themes (Lewis & Baker, 2011; Lewis et al., 2011;

Lewis, Heath, Michal et al., 2012; Lewis, Heath, Sornberger et al., 2012). It is also not uncommon for NSSI to be presented as a viable and at times justifiable response to manage emotional pain (Lewis & Baker, 2011). To this end, the aspect of NSSI recovery and the presentation of hopeful messages about the prospect of recovery are seldom presented (Lewis, Heath, Sornberger et al., 2012). In many instances, recovery is presented as either impossible or extremely difficult, and NSSI is presented as uncontrollable and impossible to resist (Baker & Lewis, 2013; Lewis & Baker, 2011; St. Denis, Lewis, Rodham, & Gavin, 2012). Taken together, it has been suggested that if these messages resonate with the individual accessing them and they are repeatedly accessed, they may reinforce NSSI as a normative response to assuage emotional distress and pain and that little can be done to stop self-injuring; in turn, this may lead to continued NSSI and reticence to seek help or make efforts to stop NSSI (e.g., Lewis & Baker, 2011; Lewis, Heath, Michal et al., 2012).

Shared NSSI Strategies. Across numerous message boards (Whitlock et al., 2006) and personal NSSI Web sites (Lewis & Baker, 2011) researchers have found that individuals who self-injure share potentially detrimental NSSI strategies with others who self-injure. Examples include posting NSSI methods (e.g., new ways to cut or burn skin) as well as ways to hide NSSI from others (e.g., suggesting locations on the body to injure which may not be visible to others) (Lewis & Baker, 2011; Whitlock et al., 2006); shared less frequently are first-aid tips, which offer suggestions and tips for individuals to use before self-injuring (e.g., disinfecting a razor) and after (e.g., cleaning and caring for a resultant injury) (Lewis & Baker, 2011). By disseminating these strategies to those who self-injure, it may work to reinforce NSSI by virtue of increasing people's capabilities to self-injure and promoting the notion that NSSI should be hidden from others (Lewis & Baker, 2011; Whitlock et al., 2006).

16.2.2.2 Triggering Non-suicidal Self-Injury Urges

Another concern identified by researchers is the aspect of triggering (Lewis & Baker, 2011; Lewis et al., 2011). Triggering refers to the notion that certain forms of online material are especially upsetting for those who access it. In turn, this produces heightened NSSI urges, which ultimately exacerbates NSSI risk. Accordingly, it is not uncommon for NSSI Web sites and e-communities to carry trigger warnings, which serve to caution others that by accessing additional NSSI content (within the Web site or e-community) individuals may be triggered to self-injure. Concerns over triggering seem to be particularly salient for more graphic NSSI material, such as photographs (Baker & Lewis, 2013; Lewis & Baker, 2011; Duggan et al., 2011), videos (Duggan et al., 2011; Lewis et al., 2011; Lewis, Heath, Sornberger et al., 2012), and vivid text descriptions of NSSI enactment (Lewis & Baker, 2011; Whitlock et al., 2006).

Despite the large number of trigger warnings posted online and widespread assumption that NSSI e-material triggers NSSI, the degree to which this transpires is not well documented (see Lewis, Heath, Michal et al., 2012). In a study exploring

the nature of personal NSSI Web sites (which allow individuals to keep a log of their experiences with NSSI), a small number of Web sites provided direct testimony from site owners that they had self-injured after accessing what they referred to as triggering NSSI images and text on other Web sites (Lewis & Baker, 2011). In another study investigating viewers' responses to NSSI videos on YouTube (as indexed by video comments), a small percentage of individuals provided testimony that the graphic content of NSSI videos triggered the viewer (who posted the comment) to self-injure (Lewis, Heath, Sornberger et al., 2012). Interestingly, not all individuals seem to be impacted by graphic NSSI imagery in the same way. A recent study examining people's comments about NSSI photographs in an online forum found that some individuals were triggered by the content, whereas others indicated that by virtue of viewing the images, they had a reduced urge to self-injure (Baker & Lewis, 2013). In sum, it seems that (at least some) individuals are differentially impacted by potentially triggering NSSI material when online; this underscores the need for more empirical work in this area.

16.2.2.3 Pro Self-Injury Content

As noted earlier, several major social networks have made efforts to ban what they refer to as *pro self-harm* content, a broad referent referring to material actively promoting NSSI, suicide, and eating disorder behavior. Unlike the scope and nature of pro-eating disorder content on the Internet (discussed in the next section), pro-NSSI content is not well studied. Only a handful of studies have reported exclusively pro-NSSI content, which involves statements and online content (e.g., imagery, video), which promotes and/or justifies NSSI as a viable response to distress (Lewis & Baker, 2011; Lewis et al., 2011; Whitlock et al., 2006). As such, the existence of pro-NSSI content, including possible pro-NSSI Web sites and e-communities, merits further empirical exploration.

16.3 Eating Disorders and the Internet

Individuals with EDs frequently use the Internet to discuss ED activities (e.g., Wilson, Peebles, Hardy, & Litt, 2006). ED Web sites are often classified as either pro-ED (e.g., pro-anorexia [*pro-ana*], pro-bulimia [*pro-mia*]) or pro-recovery. Pro-ED Web sites focus on individuals who wish to begin or maintain eating disorder behaviors; these Web sites sometimes promote ED behaviors as a lifestyle choice rather than an illness and often provide dieting tips, techniques for engaging in destructive behaviors, and *thinspiration* (i.e., words or images meant to inspire ED behaviors such as fasting) with the intention of reinforcing and maintaining ED behaviors (Borzekowski, Schenk, Wilson, & Peebles, 2010; Chesley, Alberts, Klein, & Kreipe, 2003). Many Web sites do not explicitly describe themselves as pro-ED (i.e., they do not describe EDs as a lifestyle choice), but still have some of the same pro-ED content and level of harm as self-proclaimed pro-ED Web sites (Borzekowski et al., 2010). In contrast, pro-recovery Web sites focus on individuals who wish to recover, are in the process of recovering, or have already recovered

from an eating disorder (Wilson et al., 2006). Pro-recovery Web sites describe eating disorders as destructive illnesses, promote support and understanding for individuals with eating disorders, discourage the use of potentially triggering material (e.g., posting weights, sharing ED tips and techniques), and provide information on recovery (Chesley et al., 2003). While some pro-ED Web sites share features of pro-recovery Web sites (e.g., providing recovery links), they assume that the individual is choosing to actively participate in the ED (Dias, 2003).

Although both pro-ED and pro-recovery Web sites are frequently visited by individuals with EDs (e.g., Peebles et al., 2012; Chesley et al., 2003; Wilson et al., 2006), Web sites with pro-ED content may be more prevalent online (Borzekowski et al., 2010). Pro-ED search terms are entered into Google's search engine more than 13 million times annually, with *pro-ana* being the most frequently used search term (Lewis & Arbuthnott, 2012). It is thus not surprising that the majority of the research on ED material online has focused on pro-ED Web sites over pro-recovery Web sites. Despite the fundamental differences between pro-ED and pro-recovery Web sites, they appear to share similar benefits and risks and are discussed together below.

16.3.1 Potential Benefits of Online Eating Disorder Activity

16.3.1.1 Support and Validation

Increased Support Online. Online ED Web sites frequently offer opportunities for interactions (e.g., through forums, chat rooms, blog comments) between individuals with EDs (Borzekowski et al., 2010). Individuals with EDs are socially stigmatized and may feel poorly understood within their offline relationships. Online ED communities may offer these individuals the opportunity to share experiences and gain mutual support in an accepting environment and thus may be beneficial to individuals with EDs who visit these e-communities (Cspike & Horne, 2007; Mulveen & Hepworth, 2006; Ransom, La Guardia, Woody, & Boyd, 2010; Tierney, 2008).

Unlike offline support groups, where only those individuals directly involved in a conversation typically benefit from the interaction, a large number of individuals may benefit from e-communities. Within online ED forums, *posters* (i.e., individuals who post a thread in the forum), *feedback givers* (i.e., those who give feedback to the poster), and *silent browsers* (i.e., individuals who read content posted by others without actively participating in the e-community) may all benefit through the personal disclosures, emotional support (e.g., empathy giving, feelings of not being alone, feelings that others understand), and informational support (e.g., recovery resources, education about EDs) shared in the forum threads (Flynn & Stana, 2012). When surveyed, members of a pro-ED forum reported getting more support from other members regarding general life stressors as compared to eating concerns; more support for both types of concerns was perceived in the e-community than offline (Ransom et al., 2010). Furthermore, the ability to use

the Internet at any time, from anywhere, enhances the value of the Internet as a medium of support for individuals with EDs (Tierney, 2008; Wesemann & Grunwald, 2008); on one bulimia forum, 43 % of new threads were created between 11 P.M. and 5 A.M.—a time period in which offline support is likely to be unavailable (Wesemann & Grunwald, 2008).

Content of Online Support. Several studies have analyzed the content of ED e-communities (e.g., Fox, Ward, & O'Rourke, 2005; Juarascio, Shoaib, & Timko, 2010; Mulveen & Hepworth, 2006; Wesemann & Grunwald, 2008). A study of excerpts from pro-ED e-communities found that while users supported each other in losing weight, little attention was paid to the manner in which the weight was lost (i.e., whether ED behaviors were used); users also displayed a high degree of responsibility when extreme weight loss occurred by encouraging one another toward health (Mulveen & Hepworth, 2006). Similarly, a study of public pro-ED groups on Facebook and MySpace social networking sites found that while both social support and eating disorder specific content were present, interactions were primarily focused on social support and contained less specific ED content than expected; furthermore, negative reactions from members toward overly eating disorder specific content were common (Juarascio et al., 2010). Thus, content on the pro-ED e-communities may reflect the ambivalence that an individual with an ED may experience prior to being ready to begin a recovery process; these e-communities allow users a safe place to process this ambivalence (Mulveen & Hepworth, 2006).

Pro-recovery forums were found to have similar content to pro-ED forums (Riley, Rodham, & Gavin, 2009; Wesemann & Grunwald, 2008). A content analysis of forum threads in a pro-recovery bulimia forum was found to most frequently contain problem-oriented threads (i.e., alternatives to ED behaviors; food, calories, or weight; emotional experiences; recovery information and offline supports), followed by communication-oriented threads (i.e., topics unrelated to the ED, including communication of a personal and private nature directed at specific members), and a small number of meta-communication threads (i.e., communication on the forum as the topic of discussion) (Wesemann & Grunwald, 2008). Thus, similar to pro-ED Web sites, pro-recovery Web sites may also provide a space for individuals with EDs not just to communicate with one another but also to process their ED and negotiate their self-images with others also attempting to recover from EDs (Wesemann & Grunwald, 2008).

16.3.2 Risks Associated with Online Eating Disorder Activity

16.3.2.1 Reinforcement of Eating Disorder Behaviors

Eating disorder Web sites have been criticized for reinforcing and maintaining ED behaviors [for a review, see Rouleau and von Ranson (2011)]. Some content and patterns of social interaction found on ED Web sites and e-communities are associated with ED behaviors (e.g., Blair, Kelly, Serder, & Mazzeo, 2012; Harper,

Sperry, & Thompson, 2008; Jett, LaPorte, & Wanchisn, 2010; Juarez, Soto, & Pritchard, 2012; Peebles et al., 2012; Wilson et al., 2006) and may promote an eating disorder identity (e.g., Gavin, Rodham, & Poyer, 2008; Haas, Irr, Jennings, & Wagner, 2010; Riley et al., 2009), as outlined below.

Eating Disorder Content. Eating disorder Web sites may be harmful when viewers learn about and copy dangerous behaviors (Borzekowski et al., 2010; Cspike & Horne, 2007); thus, similar to online NSSI activity, there is concern that certain forms of online ED material (e.g., providing tips and strategies) may contribute to the reinforcement of ED behavior. Among adolescent patients with eating disorders, 96 and 46.4 % who viewed pro-ED Web sites and pro-recovery Web sites, respectively, reported learning new techniques to lose weight or purge (Wilson et al., 2006). Similarly, after exposure to pro-ED Web sites, female college students without a history of EDs reported using techniques on the pro-ED Web sites to reduce their caloric intake over the following week (Jett et al., 2010). The most harmful Web sites tend to have warnings about distressing material, attempt to deter *wannabes* (i.e., individuals who are dabbling in ED behaviors), and give tips and techniques for engaging in multiple forms of extreme ED behaviors—many of which could lead to immediate and life-threatening problems (Borzekowski et al., 2010). Within pro-ED e-communities, ED symptoms or problems may be reframed as signs of success (Gavin et al., 2008).

Associations with Eating Disorder Behaviors. Pro-ED Internet activity has been associated with eating disorder behaviors (e.g., Blair et al., 2012; Harper et al., 2008; Jett et al., 2010; Juarez et al., 2012; Peebles et al., 2012; Wilson et al., 2006), increases in negative affect (Bardone-Cone & Cass, 2006, 2007; Theis, Wolf, & Kordy, 2011), and reductions in self-esteem (Theis et al., 2011). One study comparing the viewing of a pro-ED Web site and a control Web site found that women reported a decreased caloric intake after viewing the pro-ED Web sites (Jett et al., 2010). Similarly, another study found that a greater intention to exercise and perceptions of being at a heavier weight were reported after the pro-ED Web site was viewed relative to when a control Web site was viewed (Bardone-Cone & Cass, 2006, 2007). Adolescents with EDs and who accessed pro-ED Web sites had a longer duration of illness (Wilson et al., 2006). Using both pro-ED and pro-recovery Web sites was associated with a greater number of hospitalizations (Wilson et al., 2006). There seems to be a relation between increased viewing of ED Web site and more ED pathology; specifically, women who visited pro-ED Web sites daily for at least 12 months reported greater eating pathology and impairment, more extreme weight loss behaviors, and more harmful post-Web site usage activities (Peebles et al., 2012).

Competition and Thinspiration. Competition between individuals with EDs, and self-comparisons to thinspiration, may further reinforce ED behaviors (Cspike & Horne, 2007; Rouleau & von Ranson, 2011). Some pro-ED Web sites allow users to post photos of themselves and receive validation from the e-community

(Fox et al., 2005). Thinspiration allows users to compare their own image to those images already validated by others (Rouleau & von Ranson, 2011). The majority (i.e., 59 %) of pro-ED Web site users reported visiting pro-ED Web sites in order to obtain thinspiration (Cspike & Horne, 2007). Indeed, the most dangerous pro-ED Web sites are found through the search terms related to *thinspiration* and *thinspo*, relative to other pro-ED search terms (Lewis & Arbuthnott, 2012). Less harmful pro-ED Web sites may still provide dieting tips but may also provide information related to recovery (Borzekowski et al., 2010; Lewis & Arbuthnott, 2012).

Eating Disorder Identities. Eating disorder Web sites may also reinforce ED identities that work to maintain ED behaviors (e.g., Gavin et al., 2008; Haas et al., 2010; Riley et al., 2009). Disclosures of ED behaviors and pro-ED thoughts, as well as the group bond created by sharing a secret pro-ED identity, may contribute to the strengthening of personal (Gavin et al., 2008; Haas et al., 2010) and collective (Haas et al., 2010; Whitehead, 2010) ED identities. Two themes have been identified for managing a pro-anorexia identity online: maintaining a sense of the pro-anorexic self as abnormal (i.e., different from others) and keeping the ED identity a secret (Gavin et al., 2008). These are reinforced on pro-anorexia e-communities by co-constructing anorexic identities through disclosures of loyalty to anorexia and associated behaviors, self-loathing and self-deprecation, advice giving (e.g., tips and techniques to lose weight, managing offline social situations), and group encouragement and cohesion (Gavin et al., 2008; Haas et al., 2010).

The organization of an in-group (i.e., members of the e-community) and out-group (e.g., *wannabes*) may reinforce a collective eating disorder identity and may influence members to make claims proving that they belong to the e-community (Fox et al., 2005; Haas et al., 2010; Riley et al., 2009; Whitehead, 2010). Staged photographs and signatures containing weights (e.g., highest weight, lowest weight, current weight, and goal weights) are commonly used to support an ED identity (Fox et al., 2005). In both pro-anorexia forums (Boero & Pascoe, 2012; Riley et al., 2009) and pro-recovery forums (Riley et al., 2009), body talk (i.e., physical descriptions, descriptions of doing something with the body, bodily experiences) has been used to provide evidence toward ED identity claims (e.g., as a pro-anorexic, as recovering) and the right to participate in the e-community. Discourse analysis suggests that while both pro-anorexia and pro-recovery Web sites contained communication related to a thin-ideal and claims to group membership, only the pro-anorexia Web sites reframed health concerns as markers of eating disorder success as a means to establish a pro-ED identity (Riley et al., 2009).

16.3.2.2 Thwarting Recovery

Pro-ED Web sites often operate under the presumption that the individuals using these Web sites do so with the intention of maintaining their ED behaviors (e.g., Rouleau & von Ranson, 2011). The emergence of pro-ED on the Internet has been speculated to reflect the desire of those who suffer from EDs to be in control of their ED behaviors (Fox et al., 2005). Labeling the ED as a lifestyle choice or way of life, and the eating disorder as a personal friend or enemy

(e.g., *ana* or *mia*), empowers the individuals who use these e-communities to perceive themselves as choosing the ED behaviors, rather than suffering from a mental illness (Mulveen & Hepworth, 2006). When this perception is challenged, those who identify themselves as pro-ED may actively protect their pro-ED self-identity. For example, when pro-anorexia users were exposed to pro-recovery comments, they became more likely to continue posting pro-ED photos on Flickr (Yom-Tov, Fernandez-Luque, Weber, & Crains, 2012). The sharing of tips and techniques around concealment of the eating disorder is common on pro-ED Web sites (e.g., Borzekowski et al., 2010) and may further influence individuals with EDs to avoid seeking treatment (Rouleau & von Ranson, 2011).

The perception that *outsiders* (e.g., doctors, family, friends) fail to understand the role of the ED in a pro-ED individual's life is frequently discussed on ED e-communities (Fox et al., 2005). This distrust in medical authority and advice may contribute to the pro-ED e-community's rejection of the ED as a mental illness, and the subsequent normalization and acceptance of the community's understandings and practices (Mulveen & Hepworth, 2006). In this regard, pro-recovery Web sites tend to differ from pro-ED Web sites. Although medical and psychological language in reference to ED behaviors and functions is absent on the pro-ED Web sites, it is central to communications on pro-recovery Web sites (Riley et al., 2009).

16.4 Implications for Researchers

16.4.1 Online Non-suicidal Self-Injury Activity

With growing research suggesting that online NSSI activity may affect those involved, it will be essential to formally investigate the impact of online NSSI activity. In particular, efforts are needed to examine whether online NSSI activity impacts NSSI thoughts and behavior and which processes are involved (e.g., how and why NSSI may be reinforced in some cases). The impact this has on NSSI intervention may also merit empirical consideration; for instance, if some forms of NSSI e-activity reinforce NSSI, this may limit the effectiveness of certain treatments. Related to this, the notion of triggering warrants further research—especially in light of recent findings that individuals may be affected by NSSI images in different ways (Baker & Lewis, 2013).

It will also be important for researchers to explore the motivations for online NSSI activity more formally. Although some motives for online NSSI activity can be inferred from the literature (e.g., to get social support), this has not been formally studied, and it cannot be assumed that all potential motives have been elucidated. A clear understanding of what contributes to these activities is critical in terms of gaining further insight into why these activities are repeated in some cases and how they may be addressed when the nature of the online activity is worrisome (e.g., reinforces NSSI).

Although a significant amount of research and public attention has focused on the risks of online NSSI activity, many researchers indicate that the Internet may

carry significant promise as a means to reach those who self-injure and to address NSSI (Lewis & Baker, 2011; Lewis et al., 2011; Lewis, Heath, Michal et al., 2012; Lewis, Heath, Sornberger et al., 2012; Lewis, Rosenrot, & Messner, 2012; Whitlock et al., 2006; Whitlock, Lader, & Conterio, 2007). Indeed, researchers have reported that many young people who self-injure would prefer getting NSSI help and resources via the Internet (Hasking, Martin, & Berger, 2010). Thus, efforts are needed to identify novel ways to use e-technology to reach those who engage in online NSSI activity and to provide needed NSSI resources and help. Finally, as the nature of e-activity changes over time in popularity, scope, and nature, it will be imperative for researchers to keep pace with these changes.

16.4.2 Online Eating Disorder Activity

Several research directions have emerged from current knowledge of ED Web sites and e-communities. The role of these Web sites and ED e-communities in the development, maintenance, and cessation of an ED needs to be further elucidated with longitudinal data. A large amount of research has already been conducted examining the nature and content of ED Web sites (e.g., Fox et al., 2005; Juarascio et al., 2010; Mulveen & Hepworth, 2006; Wesemann & Grunwald, 2008), and this research has informed clinicians regarding the benefits and risks associated with ED e-communities. Less is known about the members' experiences of ED e-communities and the perceived functions that these communities serve for these members in all stages of the ED.

Given the known risks and benefits of ED e-communities and the similarities between pro-ED and pro-recovery e-communities (e.g., Riley et al., 2009; Wesemann & Grunwald, 2008), the use of online support groups within recovery programs needs to be carefully studied in future research. Similarly, although ED e-communities have been criticized for impeding the recovery process, research has found that the opposite may also be true; e-communities may offer users a safe place to process existing ambivalence regarding recovery and to receive support toward healthier behaviors (e.g., Wesemann & Grunwald, 2008). Thus, the influence of ED e-communities on the recovery process has yet to be determined.

16.5 Implications for Clinical Practice

Clinicians working with clients engaging in NSSI and/or who struggle with ED difficulties need to know whether their clients are also engaging in forms of online activity that may impact the course of treatment. To assist clinicians in these cases, we discuss aspects of assessment, formulation, and treatment below.

16.5.1 Initial Steps

Online activity may have a great deal of relevance to clients engaging in NSSI and/or who struggle with EDs. As noted above, the Internet may represent a salient and preferred mode of communication for many of these individuals (Cspike & Horne, 2007; Lewis, Heath, Michal et al., 2012; Lewis, Heath, Sornberger et al., 2012; Mulveen & Hepworth, 2006). At the same time, some clinicians may be less familiar with the scope and nature of online activities and terminology used to refer to these activities. For many clinicians, the Internet may be less salient in their daily lives (Whitlock et al., 2007). Thus, familiarization with the types of online activities individuals engage in when online may be helpful. Table 16.1 outlines some common online activities and describes related terms. Increased familiarity with these terms may assist in clinical assessment, as discussed next.

16.5.2 Assessment

Similar to assessment recommendations for NSSI (see Klonsky et al., 2011), a functional assessment may have utility as a means to assess online activities related to NSSI, EDs, or both. Indeed, this approach has been recommended in recently published guidelines to assess online NSSI activity (Lewis, Heath, Michal et al., 2012). Using a functional assessment, clinicians can work with clients with the goal of understanding the scope and nature of their clients' online activities (regarding NSSI, EDs, or both).

In the initial session, clinicians can orient their clients to the use of a functional log as a means of monitoring and tracking the online activities of their clients. It is recommended that clients be asked to try this between the first and second sessions. From here, clinicians will be able to further assess the client's online activities in a more detailed manner during the second session and then in subsequent meetings as needed. Among the types of data to record in the functional log are as follows (a) events/interactions, thoughts, and feelings that preceded the online activity; (b) the events/interactions online and the thoughts and feelings during the online activity; and the (c) events/interactions, thoughts, and feelings following the online activity. To understand the potential impact of a client's online activity over the course of treatment, a weekly log can be maintained by the client between sessions, which clinicians can review with clients during their meetings.

Once the initial assessment is complete, a broader assessment of the client's online activities can be conducted. Table 16.2 outlines a number of potentially useful questions that may facilitate this process. By conducting a more in-depth assessment, clinicians will be better able to identify the types of online activities engaged in by the client (e.g., types of interactions, types of Web sites accessed); in turn, this is conducive to determining if the client is accessing potentially problematic material (e.g., which may contribute to reinforcement of NSSI and/or EDs), material that is more adaptive and supportive in nature (e.g., which advocates for recovery and help-seeking), or in some cases, both.

Table 16.1 Internet factsheet: key terms and related activities

	Community Web sites	Social networking Web sites	Video-/photo-sharing Web sites
Terms	<p><i>Chat forum</i>: space dedicated to real-time chat among individuals who are accessing the Web site</p> <p><i>Moderated</i>: content and membership on Web site are controlled and regulated by creator</p> <p><i>Discussion forum (message board)</i>: online space where users can openly exchange information and opinions regarding a common interest/theme</p> <p><i>e-Communities</i>: electronic community/social network of users who share a common interest</p> <p><i>Peer driven</i>: created and moderated by a nonprofessional</p> <p><i>Professionally driven</i>: created and moderated by a mental health professional</p>	<p>• <i>Facebook</i></p> <p><i>Friends</i>: people you connect and share profile information with</p> <p>Post: public sharing of information on a wall</p> <p>Profile: user space containing personal information, online exchanges, and photos</p> <p>Wall: user profile space where friends can post and share information</p> <p>• <i>MySpace</i></p> <p><i>Blog</i>: a personal journal created by user</p> <p>• <i>Twitter</i></p> <p><i>Followers</i>: size of audience following individual's tweets/profile</p> <p><i>Tweet</i>: real-time information sharing in 140 characters or less</p> <p>• <i>General (common terms found across all social networking Web sites)</i></p> <p><i>Group</i>: collection of individuals who keep in touch surrounding a particular theme</p> <p><i>Instant chat/messaging (IM)</i>: live, real-time chat that occurs in present time between members</p> <p><i>Members</i>: individuals who join a group</p> <p><i>Messages</i>: private exchange of material (e.g., messages, photos)</p> <p><i>Public vs. private group</i>: membership required</p>	<p><i>Account</i>: viewer to verify they are a mature audience (18 years and older)</p> <p><i>Character</i>: videos containing live individual(s)</p> <p><i>Comments</i>: public remarks/observations posted by video viewers pertaining to a specific video</p> <p><i>Noncharacter</i>: videos containing visual representations such as images, video stills, and/or text</p> <p><i>Subscribe</i>: to receive updates when a specific video uploader posts new videos</p> <p><i>Top favorite</i>: a user indicates a specific video is their preferred</p> <p><i>Video uploader</i>: user who creates and shares videos</p> <p><i>Video view count</i>: number of video views, also referred to as "hits"</p>
Example	<p>http://self-injury.net^a</p> <p>http://www.psyke.org^a</p> <p>http://www.something-fishy.org^a</p>	<p>http://www.facebook.com</p> <p>http://www.myspace.com</p> <p>http://www.twitter.com</p> <p>http://www.xanga.com</p> <p>(account needed to access groups)</p>	<p>http://www.youtube.com</p> <p>http://www.flickr.com</p>

Reprinted and adapted with permission from: Lewis, S.P., Heath, N.L., Michal, N.J., & Duggan, J.M. (2012). Nonsuicidal self-injury and the Internet: What mental health professionals need to know. *Child and Adolescent Psychiatry and Mental Health*, 6, 13; doi:10.1186/1753-2000-6-13

^aWeb sites are examples and are not suggested as recommendations

Table 16.2 Recommended questions about online NSSI/ED activity**I. Activity type**

Review log: What type(s) of online activities do you use concerning NSSI/ED (informational, interactive, social networking, and video viewing/sharing/posting)?

If community

What are the resources available in the community/forum?

Is this Web site professionally or peer driven? Is the Web site moderated?

Is the Web site focused on recovery? Is it focused on continuing NSSI/ED?

What specific activities do you engage in on these Web sites (live chat, posting, information seeking)?

Social networking

What social networking Web sites are you affiliated with?

Do you have friendships/connections with people concerning about NSSI/ED?

If yes, what is the nature of the relationship(s)?

If yes, have these relationships extended outside of the activity?

Are you a member of any group related to NSSI/ED?

If yes, what are the themes surrounding that group (against, pro, neutral)?

If yes, is this group public or private?

If yes, is it moderated?

Are there any visual representations of NSSI or ED (e.g., thinspiration) in these groups?

What specific activities do you engage in on these Web sites (live chat, messaging, posting, information seeking)?

Video/picture sharing

What specific Web sites do you visit?

Do you create videos/photos related to NSSI/ED/Thinspiration?

If yes, discuss themes/content of videos created

If yes, are these videos character or noncharacter videos?

If yes, what purpose does creating these videos serve (e.g., creative outlet)?

What types of videos/photos do you watch?

Are these character or noncharacter videos?

What are the general themes in these videos (against NSSI, pro-NSSI, neutral)?

Do these videos present visual presentations of NSSI/ED/Thinspiration?

If yes, are these visual presentations accompanied by a warning?

Are these visual presentations of NSSI/ED triggering?

If yes, discuss nature, intensity, and degree of triggering material

What other specific activities do you engage in on these Web sites (messaging, commenting, following channels)?

II. Frequency

Review log: Discuss frequency of NSSI/ED online activities (explore usage, during week and weekend)

III. Functional assessment of NSSI/ED behaviors in relation to Internet activities

Review log: When/why did you first start engaging in NSSI/ED online activities? Explore first episode

Has your NSSI/Have your ED behaviors increased/decreased/remained the same since you began engaging in NSSI/ED online activities?

(continued)

Table 16.2 (continued)

What are events/interactions, thoughts, and feelings that preceded/occur during/follow the online activity?
Do you self-injure before/after engaging in NSSI online activities?
<i>If yes, explore online activities that may confer/reduce NSSI risk</i>

Note: Reprinted and adapted from: Lewis, S.P., Heath, N.L., Michal, N.J., & Duggan, J.M. (2012). Nonsuicidal self-injury and the Internet: What mental health professionals need to know. *Child and Adolescent Psychiatry and Mental Health*, 6, 13; doi:[10.1186/1753-2000-6-13](https://doi.org/10.1186/1753-2000-6-13)

When conducting the functional assessment, it is recommended that clinicians not circumscribe the assessment to just the activity type (e.g., whether a client is visiting a message board or watching a YouTube video) since some clients may not accurately report what they do online or be cognizant of the impact their online activity may have on their thoughts, feelings, or behavior (i.e., NSSI or ED behavior). Thus, alongside what the client is doing online (i.e., the activity type), it is important to assess the frequency and duration of the client's online activity; this includes when the behaviors occur over the course of a day as this information helps to determine if the client's online activities are negatively affecting their daily lives (e.g., disrupting sleep, work, school) (Lewis, Heath, Michal et al., 2012).

Lastly, clinicians should carefully review the functional log in an effort to understand why certain online activities may be enacted by the client and to better understand how these online activities affect the client (i.e., positively and/or negative). Identification of possible antecedents to online activities and variables reinforcing them can shed insight into what might precede (and drive) potentially problematic online activity. In turn, this can inform a plan to address these activities. Although many clinicians may be primarily focused on identifying and curbing potentially problematic online activity, it is important to bear in mind that for many individuals, online activity related to NSSI and EDs provides needed support and validation (Cspike & Horne, 2007; Lewis, Heath, Michal et al., 2012). For this reason, practitioners should be cautious when making conclusions about what forms of online activity are detrimental to the client. If harmful online activities are identified, however, it is important to intervene and work with clients to change the nature of their online activities alongside intervention for their NSSI and/or ED.

16.5.3 Intervention

Promoting change in the context of people's online activities may be challenging, especially if clients do not view their online activity as problematic. As such, requests for clients to cease engaging in online activities related to NSSI and EDs are not recommended—in part because it is first important to identify the impact these activities have on the client using a functional assessment (discussed above) and doing so may result in the online activity becoming secretive. If there are risks

associated with the client's e-activities and these become secretive, this may be counterproductive in the context of treatment and recovery.

Guidelines to address online NSSI activity in the context of clinical care have been offered (Lewis, Heath, Michal et al., 2012) and may have utility for problematic online ED activity as well. Recommendations suggest that as an initial step in addressing these online activities, clinicians determine the client's readiness for change. To do this, the stages of change model (Prochaska & Velicer, 1997) may be useful. Accordingly, motivational interviewing may be relevant and serve as a means to effectively manage a client's ambivalence toward online activity desistance and to increase desire to change his/her online behavior. Although no line of work has directly examined this therapeutic approach in the context of addressing online activity related to NSSI or ED behaviors, motivational interviewing has been used to increase motivation to change with clients who engage in NSSI (Kress & Hoffman, 2008), EDs (Macdonald, Hibbs, Corfield, & Treasure, 2012) and those with Internet addiction (Griffiths & Meredith, 2009).

When clients are open to adopting alternative activities in place of problematic online behavior, clinicians can use a number of strategies. Clinicians may opt to work with clients to develop a list of offline activities (e.g., exercise, communicating with friends or family) that can be used in place of problematic online activities. However, as indicated above, it may be unhelpful to attempt to discourage online activity altogether. As noted above, the Internet may be highly salient for many who engage in NSSI and/or ED behaviors (Lewis, Heath, Michal et al., 2012; Rouleau & von Ranson, 2011). As a result, replacing problematic online activities with more adaptive ones may be more effective. One part of this is directing clients to adaptive online activities. From here, the functional log can continue to be used as a means of understanding the impact of these newer and more adaptive online activities and to establish a new set of healthy online activities for clients. As identifying reputable Web sites to recommend to clients can be difficult, readers may find Table 16.3 helpful, which outlines and describes a number of recommended, supportive, recovery-focused, and monitored Web sites for both NSSI and EDs. Many of these Web sites can also be recommended to people in the lives of the client who can play a supportive role in recovery (e.g., family, romantic partners). As the course of treatment progresses, a brief check-in with respect to the client's online activities should occur as a part of assessing the client's overall functioning. If abrupt changes in the client's online activities are reported, it may be indicative of a change in their overall wellbeing.

16.6 Summary

With the influx in Internet use and social networking over the past several years, the aspects of online activity regarding NSSI and EDs have emerged as new and important areas of empirical focus. Research from these efforts have identified a number of similarities between online NSSI and online ED activities with respect to potential benefits (e.g., social support) and risks (e.g., reinforcement); however,

Table 16.3 Web sites providing quality NSSI and eating disorder resources

	Organization	Resource	Stakeholders
NSSI	Self-injury outreach and support (SIOS) http://www.sioutreach.org	Nonprofit outreach initiative providing information and resources about self-injury	Individuals who self-injure Mental health professionals Physicians School professionals Family Friends
	Cornell research program on self-injurious behavior http://www.crpsib.com	Summarizes research and provides resources related to understanding, identifying, treating, and preventing self-injury	Mental health professionals Physicians School professionals
	Self abuse finally ends (SAFE) http://www.selfinjury.com	Treatment center Web site providing information and resources about self-injury, with a focus on interventions for individuals who self-injure	Individuals who self-injure Mental health professionals Physicians School professionals Family Friends
Eating disorders	National eating disorders association (NEDA) http://www.nationaleatingdisorders.org	Nonprofit organization dedicated to the prevention and advocacy for eating disorders	Individuals with eating disorders Mental health professionals School professionals and coaches Family Friends
	Academy for eating disorders http://www.aedweb.org	Professional association committed to ED research, education, treatment, and prevention	Mental health professionals Physicians Researchers General public

there may also be unique benefits and risks associated with each (e.g., triggering in the context of online NSSI activity, thinspiration in the context of online ED activity). In light of the infancy of these fields, more research is needed to better understand the impact these online activities may have and how to effectively address the potential harm some activities might confer. Alongside empirical work, clinicians may need to consider these impacts in clinical contexts when working with clients who self-injure and/or who struggle with eating disorder difficulties.

16.7 Case Vignette

Now 17, Jessica has been self-injuring since she was 15. She cuts episodically but this becomes more frequent during times of stress. Jessica describes herself as “sensitive” and reports being emotionally reactive; she struggles managing her emotions. Jessica has low self-esteem and a poor body image. In the past, she has binged and purged though she does not meet diagnostic criteria for an eating disorder. After seeing several fresh cuts on her arm, Jessica’s mother brought her to see a therapist.

As a part of the initial assessment, Jessica’s therapist conducted a comprehensive assessment of Jessica’s self-injury and other mental health difficulties. Jessica’s therapist also explored her online activities. After asking several initial questions about her Internet behavior, Jessica’s therapist introduced the use of a functional log. To help Jessica understand how to use the log, her therapist drew from an incident that Jessica mentioned when responding to the initial questions about her Internet activity. Specifically, Jessica reported that a few nights ago she was feeling very upset and alone. Everyone in her home had gone to bed. She decided to go online to visit a self-injury message board, which she has found supportive in the past. She said she goes there because they “get me. . .they know what it’s like.” On this particular night, Jessica started to read a new post from a member of the message board. The individual who posted the message had also posted a link to photos of his self-injury. Jessica clicked on the link and saw the images. She reported that this really upset her and “really made me want to cut.”

By completing the log together, Jessica was able to make initial connections between how she felt prior to going online, what she accessed (i.e., the images), and how she felt after viewing this content. Although she recognized that seeing the images of self-injury increased her urge to hurt herself, she maintained that she had no intentions to stop visiting the message board because “it’s not all bad like you think. . .it mostly helps.” Her therapist validated Jessica’s concern and acknowledged that if she finds the message board supportive, it is understandable that she would not want to stop visiting it. As homework, Jessica agreed that she would set aside time each day to complete the log between meetings with her therapist.

Over the next several sessions, Jessica completed the functional log and her therapist took time during each session to review it. These discussions helped Jessica to better understand that although she received needed support from most of her online activities, some of the content she accessed in the message board was upsetting and even “triggering.” In turn, this contributed to a conversation about the advantages and disadvantages associated with certain forms of her Internet activity. Jessica’s therapist used a number of motivational interviewing techniques over the next several sessions, which allowed Jessica to generate her own reasons for and against different types of online activities related to self-injury. As a result, Jessica noticed that she had more reasons to refrain from a number of her online activities (including visiting the abovementioned message board) than reasons for engaging in these activities. Jessica and her therapist also developed a list of healthy online activities that she could use when she felt alone and her therapist provided a list of

several self-injury Web sites that might be helpful to use when she felt upset or had urges to self-injure; they also worked on and developed a number of offline strategies (e.g., calling a friend, relaxation techniques, painting) that Jessica could use during these times.

Over the course of therapy, Jessica visited the self-injury message board less often, and she and her therapist worked on a variety of coping strategies rooted in dialectical and cognitive behavior therapies to manage her self-injury. They also worked on her response to distress more generally and began to address her low self-esteem and poor body image. As therapy progressed, Jessica found that she self-injured less often; she also had no subsequent binge-purge episodes, especially as she began to feel better about herself and became more accepting of her body.

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