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“PRO-ANA” WEB-LOG USES AND GRATIFICATIONS:
TOWARDS UNDERSTANDING THE PRO-ANOREXIA PARADOX

by

DANA G. MANTELLA

Under the Direction of Cynthia Hoffner

ABSTRACT

Eating disorders have the highest mortality rate of all mental illnesses. Currently, web-logs are hosts to thousands of pro-ana (short for pro-anorexia) blogging participants, joining together with a common claim that eating disorders are “lifestyles not illnesses.” This study explored participation motives among pro-ana blogging participants, relationships to individual psycho-social factors, and to unique web-log features. Results from the cross-sectional online survey suggest three main participation motives among blogging participants (community, obtaining social/ emotional support, and ego-protection. Results also indicate individual factors such as; social support satisfaction, drive-for-thinness, and BMI were related to blogger motives in a various diverse ways. Analyses of the findings from the present study reflect the self-disclosive nature of the blogging process. The results have several implications for eating disorder, computer-mediated communication, internet social support, and blog/blogging research.

INDEX WORDS: Eating disorders, Web-logs, Bloggings, Social support, Internet, Online communities, Self-disclosure, Motives, Uses and gratifications

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by

DANA G. MANTELLA

Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of
Master of Arts
in the College of Arts and Sciences
Georgia State University

2007

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Dana Gabrielle Mantella
2007

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by

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Electronic Version Approved

Office of Graduate Studies
College of Arts and Sciences
Georgia State University
May 2007

Dedication

To my family, for their love and support,

To Dr. Hoffner, the ideal thesis advisor, for her confidence in me, patience with me, and for her constant encouragement,

To my friend J.A., and to all of the others who lost their lives battling this disorder.

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Chapter One

Review of Literature

Introduction

Because of the anorexic's persistently negative subjective it becomes difficult for family members and society in general to find the correct language with that to talk to her. With each statement, no matter how seemingly benign, the victim gleans yet more material to confirm her negative beliefs about herself. She becomes increasingly less capable of any rational perspective. (Claude-Pierre, p. 42, 1997)

According to the National Eating Disorders Association (2002), as many as ten million women and one million men have an eating disorder such as anorexia nervosa or bulimia nervosa. Eating disorders are serious health conditions that are associated with a host of severe physiological and psychological complications (Kaplan Seidenfeld, Sosin, & Rickert, 2004).

Alarmingly, over the past several years people have been joining together in “pro-ana” (short for pro-anorexia) communities where members promote, celebrate, encourage and support eating disordered “lifestyles.” For nearly a decade, pro-ana communities have been pervading the World Wide Web through the form of discussion boards, blog groups (bloggings), and chat-rooms. Despite joint efforts to eliminate pro-ana sites from the World Wide Web in 2001 by non-profit organizations such as the National Eating Disorders Association and major Internet service providers (including Yahoo! and AOL), their membership only seems to be growing (Payne, 2004).

In 2006, a Google.com search on the term “pro-ana” revealed over 1,300,000 matches. Additionally the google.com search revealed over 64,000 matches for “pro-ana blog,” with 58,000 of those matches from popular blog host site Xanga.com. These Internet based personal web-logs (blogs) are new popular online innovations (Hevem, 2004) and host to thousands of pro-ana bloggers.

Pro-ana blog members are joining together with a common claim that eating disorders are “lifestyles not illnesses.” This is disconcerting, particularly when considering the National Association of Anorexia Nervosa and Associated Disorders (2000) claim that having anorexia makes a person 12 times more likely to die than other people the same age without anorexia. The severity of eating disorders coupled with the high number of pro-ana blogging participants warrant further exploration.

The major theoretical framework of this study is ‘uses and gratifications.’ Uses and gratifications is a psychological-communication perspective which focuses on motives for using the media, the factors that influence those motives and how individuals gratify their needs through media (Papacharissi & Rubin, 2000). Computer-mediated communication has played a key role in the revival of uses and gratifications theory (Ruggiero, 2000). Researchers interested in computer-mediated communication have used the uses and gratifications approach to study motives for communicating within Internet communities (Papacharissi & Rubin, 2000; Wright, 2002). This study will explore motives for pro-ana blogging use, while taking into account individual psychological/social factors, unique blog features, and eating disorder characteristics.

Eating Disorders and Pro-Ana

Eating Disorders. The term “eating disorder” is generally used when referring to anorexia or bulimia (Belangee, Sherman, & Kern, 2003). People with anorexia are often characterized as having excessive fear about being or becoming fat, a fear that drives them to severe caloric restriction to lose or avoid gaining weight even if they are already severely thin (National Association of Anorexia Nervosa and Associated Disorders, 2000). Bulimics often have similar fears about becoming or being fat, but the difference is that bulimics are often characterized as eating large quantities of food followed by compensatory behaviors such as purging, over exercising, or abusing diet pills and laxatives (Kaplan Seidenfeld et al., 2004).

Eating disorders have the highest mortality rate of any mental illness and are associated with severe physical and psychological complications (National Association of Anorexia Nervosa and Associated Disorders, 2000). Some examples of physical consequences associated with eating disorders are: malnutrition, dehydration, serious organ (heart, stomach, kidney, and liver) problems, major dental problems, and esophagus tears (National Association of Anorexia Nervosa and Associated Disorders, 2000). Those with eating disorders often suffer psychologically from shame, guilt, isolation, feelings of being unconnected or unsupported within one’s social network, and interpersonal difficulties (Belangee et al., 2003; Chassler, 1997).

According to the National Association of Anorexia Nervosa and Associated Disorders (2000), a majority of eating disorder sufferers do not clinically meet diagnostic criteria for one particular eating disorder. In fact, up to 50% of those with anorexia will

eventually exhibit bulimic symptoms. Sub-clinical eating disorders, generally termed ‘eating disorder-not otherwise specified’ (ED-NOS), are diagnosed when an individual exhibits most but not all of the symptoms from one specific eating disorder or mixed symptoms from various eating disorders. Regardless of the specific classification, people with eating disorders have food and weight attitudes and behaviors that are neither normal nor healthy (Anorexia Nervosa and Related Eating Disorders, Inc., 2005).

The negative mind. Claude-Pierre’s (1997) theory of *confirmed negativity condition* (CNC) suggests that all eating disordered people are of two minds (the ‘negative mind’ and ‘actual mind’) that are constantly fighting with one another. When the symptoms of the eating disorder are present that means the *negative mind* has overpowered the *actual mind* (Claude-Pierre, 1997). Claude-Pierre explains that the negative mind is:

...tyrannical, hypercritical, destructive, and despair confirming. It tells its victim: Everyone HATES you. You only cause trouble. There’s nothing you can do right. You are demanding, selfish, greedy, and mean. Things will never work out for you. You make the world miserable...You’re fat and gross and ugly...You are a burden to society. You should die. (Claude-Pierre, 1997, p. 38).

For example, based on Claude-Pierre’s theory of CNC, a person suffering from an eating disorder might have a conversation in their head:

Actual Mind: Eat the chicken, you are hungry, it is healthy for you.

Negative Mind: You can’t eat the chicken, you are fat, you are gross, if you eat it you are weak and will only get fatter.

In this example, if the individual doesn't eat the chicken the individual's negative mind has won. In a temporary victory by the actual mind (consumption of the food), the negative mind may not relent, the war inside the victim's head may continue throughout the meal and may grow stronger after the meal. The negative mind may be responsible for purging behaviors to eliminate the meal and guilt/shame associated with the meal.

This distorted reality makes it not only harder to fight the eating disordered behaviors but harder to recognize the reality/ potential consequences of the disorder in general. Eating disorder sufferers may not only feel that they are making a 'lifestyle choice' but that they *should* be making *this* lifestyle choice. The 'negative mind' helps explain the high 'drive for thinness' (e.g. excessive concern with dieting, fear of gaining weight, extreme preoccupation with desire to be thinner) often found in individuals with eating disorders (Garner, Olmsted, & Polivy, 1983; Vervaeke, Van Heringen, & Audenaert, 2004). The pre-occupation with food and body, as well as the negative mind's powerful influence, may help aid in understanding the large community of "pro-ana's" that exists online.

Pro-ana online communities. Over the past several years people have been joining together in on-line pro-ana communities where members promote, celebrate, encourage and support eating disordered "lifestyles." Through content analyses, researchers have found that pro-ana sites have similar discourse across groups. Networks of users on pro-ana sites actively offer various 'tips' for other pro-ana participants, such as how to starve oneself, how to keep others from detecting the eating disorder, how to cope with the isolation that accompanies the disorder, how to vomit most effectively, and

how to eat foods with little or no calories (Keller, Rosenthal, & Rosenthal, 2005; Mastronardi, 2003).

Ferreday (2003) suggests pro-ana sites are places where members can discuss their experiences living with anorexia, and although their tone is often “celebratory,” the sites often contain information about how to avoid getting seriously ill and information about how to survive. In fact, Keller and colleagues (2005) found that nearly one-third of the pro-ana sites they explored recommended health advice (e.g., nutrition and vitamins, psychotherapy, group therapy). However, health advice may not mean ways to eliminate the eating disorder, but rather, ways to maintain life with an eating disorder. The sites may encourage ‘healthy’ diets to sustain anorexic lifestyles while still encouraging radical efforts to pursue or maintain low body weights (Fox, Ward, & O’Rourke, 2005).

Why pro-ana? The “pro-ana movement” has been positioned by several researchers as resistance against the “pathological” label assigned by the health and mental health communities that treat eating disorders as diseases to be cured (Fox et al., 2005; Mastronardi, 2003). Pro-ana communities may offer participants safe and positive places where they can share experiences and gain insight into their condition, away from the judgment, gaze and scrutiny of people in their face-to-face lives, such as family, friends, or doctors (Fox et al., 2005).

Previous literature has suggested some ways these sites are being used, yet the research has not been based on first hand accounts of pro-ana participants. The purpose of this research was to examine, based on first-hand accounts, why individuals are choosing to blog as ‘pro-ana’s.’ Furthermore, previous analyses have treated the pro-ana

communities as similar, not taking into account the unique features of the specific Internet forum used, or the possible differences among user motives. Despite the popularity of blogs in the “pro-ana community,” this area has not been explored in the literature. In fact, very little is known about blogger characteristics, or blogging practices in general (Bocij, 2004).

Blogs

According to the Web Hosting Glossary Database (2004) a blog is a mixture of a diary / guide that varies among individuals. People who own blogs (bloggers) can choose the color layout, font size, background pictures, profile picture, and other aesthetic features of their blog. The heart of the blog is often the post, which is often thought of as a ‘live journal entry’ which shows up on the blog. When a person “posts” on a blog that means that the person has written a ‘journal entry’ and submitted it, publishing it to the web (making it ‘live’). Posting to one’s blog has the potential to promote communication between the blog author and blog readers (Hevem, 2004). Once a post is submitted other bloggers can access, read and respond to the blog (Bocij, 2004).

Bloggers can narrow down their preferred communication network by joining a ‘blogring.’ CounsellingResource.com (2004) refers to a blogring as a set of interconnected blogs that often cover similar interests. If an individual chooses to join a blogring, the name of that blogring will show up on their individual blog. Additionally, a ‘blog profile’ will show up on a web-published list of all members of that specific blogring. The blog profiles often include the blog name, a profile picture, and a sentence or two of information about the blog. The blogring member lists create a way for

bloggers with similar interests to find and communicate with one another easily. A blogging member can easily gain access to another blogging member by scrolling through the member list and clicking on a blogger profile that appeals to them.

Self-disclosure through blogs. The ‘public’ or ‘live’ nature of blogs makes commenting to others blogs or posting on one’s own blog a form of self-disclosure. Self-disclosure refers to the process where one person reveals information about himself or herself (including thoughts, feelings, and experiences) to another person (Derlega, Metts, Petronio, & Margulis, 1993). Tichon and Shapiro (2003) suggest people tend to feel an affinity for others whose disclosure promises to be similar in content and intimacy. Accordingly, when a blogger is searching for a blogging to join they may look at blogger profiles to determine whether they will be able to self-disclose what they want in that particular blogging, or to particular bloggers.

The process of self-disclosure has often been viewed as a reciprocal, where one person’s self-disclosure is determined by the other person’s self-disclosure that they are disclosing to (Dindia, Fitzpatrick, & Kenny, 1997). Throughout the blogging process, bloggers can read one another’s blogs (that often contain very personal self-disclosures), and comment to one another (often including self-disclosures in the comments). According to Dindia and colleagues (1997) one major way a person can demonstrate identification with someone else is by reciprocating a person’s self-disclosure of thoughts and feelings. This reciprocal process of self-disclosure can help form relationships and generate support in online communities (Tichon & Shapiro, 2003).

When bloggers join pro-ana bloggings they have access to an instant network of bloggers who also identify as pro-ana. Fox and colleagues (2005) suggest that for those with eating disorders who are taking the “anti-recovery” stance, the pro-ana movement offers its participants a safe and positive place where they can share experience and gain further insight into their condition, while staying away from judgment.

With the highly controversial nature of ‘pro-ana’ groups and membership, self-disclosure which is appropriate or accepted in an online forum, may not be appropriate or accepted in one’s day to day (non-Internet) groups. A study by Derlega, Windstead, Greene, Serovich, and Elwood (2004) found that people often refrained from disclosing about HIV in order to keep their privacy, because they were afraid of rejection, because they blamed themselves for their situation, or because they wanted to avoid harming loved one’s. Similarly stigmatized, pro-ana bloggers may feel unable to disclose about ‘pro-ana related topics’ among their face-to face network. Pro-ana bloggers may self-disclose through the blogging process to avoid negative repercussions of the disclosures.

Pro-Ana Blogging Motives

Nine motives for participating in pro-ana bloggings were examined in this study. Three motives were utilized from a study by Nardi, Schiano, Gumbrecht, and Swartz (2004) that examined motivations driving individuals to create and maintain blogs: blogging to form and maintain community forums, blogging to document their lives, and blogging for catharsis. Pro-ana bloggings function similarly to health/support group forums, and throughout the literature both informational and emotional support have been positioned as dominant motives for health/support group use (Ridings & Gefen, 2004).

Since pro-ana bloggings function similarly to health/support group forums, social support components (emotional and informational support) were included. Specifically, due to the reciprocal nature of social support indicated throughout the literature, obtaining and providing emotional support and obtaining and providing informational support were included. Additionally, two motives for self-disclosure were utilized from Bonnesen and Hummert's (2002) study that examined painful self-disclosures: ego-protection and identity.

Blogging to form/maintain a community forum. Individuals are motivated to blog in a community where other bloggers have similar interests and concerns (Nardi et al., 2004). In general, research has indicated that a person's feeling of being a part of a social network is important for overall well-being (Dolbier & Stenhardt, 2000). In general, studies have shown that inclusion is a major interpersonal motive (Rubin, Perse, & Barbato, 1988). Social psychology has found that one of the main reasons people join groups is for affiliation and belonging (Ridings & Gefen, 2004). Throughout the literature it has been suggested that those with eating disorders often feel unwanted and unconnected (Chassler, 1997), and maintaining/forming a community forum may be particularly important for them.

Blogging to document one's life. Bloggers are motivated to blog so that they have a personal record of their lives, as well as to update others about their lives. Nardi and colleagues (2004) suggest this motive has to do with blogging to record activities and events. This motive emphasizes the importance of the "broadcast nature" where no other

bloggers are forced to pay attention; they may read voluntarily at their convenience (Nardi et al., 2004).

Pro-ana bloggers, in particular, may be seeking a place where they can document their lives and reflect on what they have written later. The blog may be a place for them to document their progress in regard to weight loss, exercise, or other aspects of their lives. This also provides the ability for pro-ana bloggers to post about their lives without feeling like they are asking for feedback.

Blogging for catharsis. Bloggers are motivated to blog for emotional release that stems from expressing deeply felt emotions through writing about thoughts and feelings (Nardi et al., 2004). Keski-Rahkonen and Tozzi (2005) suggest that the main role of Internet support groups for those suffering from eating disorders is related to emotion expression and communication with other sufferers in a safe context. Okon, Greene, and Smith (2003) suggested that those with eating disorders often were raised in families where expressing emotions was discouraged and therefore they often have trouble expressing emotions as adults. Pro-ana bloggers may not have other outlets where they can freely express their emotions. Results throughout the literature have indicated that computer mediated communications may be a good social support alternative, particularly when topics being discussed are hard to talk about, or not understood in participants' face-to-face networks (Papacharissi & Rubin, 2000; Reeves, 2000; Turner, Grube, & Meyers, 2001; Wright, 2000, 2002).

Nardi et al. (2004) found that several bloggers viewed blogging as an outlet for their feelings and thoughts, a place to “get closure out of writing.” Blogs help authors explore issues that they feel “obsessive” or “passionate” about (Nardi et al., 2004).

Blogging to obtain and provide social/emotional support. Emotional support is considered an aspect of social support and refers to obtaining or providing a feeling of being loved or cared about (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995).

Tichon and Shapiro (2003) explored communication among members of an online support group suggesting that self disclosure through open expression of concerns and frustrations is used to draw social support from other members without needing to ask for support. Tichon and Shapiro (2003) argue that self-disclosure plays a pivotal role in the elicitation of social support. Additionally, self-disclosure may be used to provide social/emotional support. Ridings and Gefen (2004) suggest that emotional support can be provided through computer mediated communications for those going through difficult times by sharing similar experiences and empathizing with them (Ridings & Gefen, 2004).

Several researchers have suggested that those who are unsatisfied with face-to-face social support may be motivated to join an Internet group for social/emotional support (Houston, Cooper & Ford, 2002; Reeves, 2000; Ridings & Gefen, 2004). Those with eating disorders often indicate that they are less satisfied with social support within their face-to-face network than individuals without eating disorders (Chassler, 1997; Jackson, Weiss, Lunquist, & Soderlind, 2005; Okon et al., 2003). Bloggings may create an ideal atmosphere for emotional support.

Examples of *providing social/emotional support* include: supporting others going through a rough time and empathizing with others by sharing similar experiences (Ridings & Gefen, 2004). Examples of *obtaining social/emotional support* include: talking out problems to acquire advice and expressing anger or distress to people who are likely to sympathize or empathize.

A study of Internet depression support group participant motives found that emotional support was the most popular reason for use (Houston et al., 2002). Wright (2002) explored motives for on-line cancer community participation suggesting that although people with cancer may feel they have little control over the disease, they may seek ways to adapt to life with cancer. Similarly, those with eating disorders often feel helpless about the situation (Chassler, 1997) and they may seek emotional support to assist with daily living with the disorder they do not feel they can change.

Blogging to obtain and provide information. Ridings and Gefen (2004) suggest that individuals often use the Internet in order to obtain and transfer information about a topic. Information exchange has been found to act as an important motivating factor for use of health support groups online. Ridings and Gefen (2004) found two thirds of the members surveyed from a computer mediated support community were motivated to participate in part by informational incentives. The online environment has been positioned as an “underground” where people in need of support can quickly transfer information, gaining support from others who understand ‘their condition’ (La Coursiere, 2001).

Ridings and Gefen (2004) argued that people are motivated to *receive information* (learn about new topics) that they believe will assist in their goal attainment. Pro-ana members may look for information that will assist them with weight loss efforts, or help them hide disordered eating behaviors from family members. *Providing information* means providing information to assist others. Tichon and Shapiro (2003) explain the support process as reciprocal within online support groups. A pro-ana blog participant may be motivated to provide informational support because of the expectation of receiving informational support when they need it. Additionally, providing support can help in the process of creating a bond between the support provider and user (Tichon & Shapiro, 2003).

Ego-protection. Bonnesen and Hummert (2002) suggested that self-disclosures motivated by ego-protection may be used in order to justify or explain problems or weaknesses that are often stereotyped by others. The researchers found that older adults were more likely than young adults to believe that painful self-disclosures (self-disclosures that are negative or painful in nature or make the discloser seem weak or vulnerable) made by an older woman were motivated by ego-protection. Bonnesen and Hummert (2002) suggested that the different norms of self-disclosure for older and younger adults may help shed light on their findings. Specifically, they argued that older adults, compared to young adults, may perceive painful self-disclosures as less intimate, less painful and more appropriate. In addition, they suggested that older people have more experience being negatively stereotyped, which may make them more likely to view painful self-disclosures as motivated by a desire for ego protection. Those with

eating disordered thoughts, beliefs and attitudes, may fear the stigma that may be associated with disclosing about those thoughts, beliefs or attitudes. In order to excuse their attitudes and behaviors they may disclose through the blogging process in order to justify their pro-ana related attitudes and behaviors.

Identity. Bonnesen and Hummert (2002) suggested people may self-disclose about things that are important to them, or that are big parts of their lives for purposes related to ‘identity.’ Keller and colleagues (2005) suggest that for many anorexics, the denial of food reflects their self-identity. Having an eating disorder often provides them with a sense of identity, enabling them to say, "I am thin," and "I am dieting," and define themselves based on their appearance (Health Encyclopedia, n.d). The practices and behaviors associated with the ‘anorexic identity’ may not be accepted in the ‘real world,’ which according to Rich (2006) may explain why those with the disorders often conceal their eating disordered practices and behaviors in order to ‘retain their anorexic identity.’

The internet provides a new arena in which identity can be explored and expressed (Huffaker & Calvert, 2005; Moinian, 2006). Huffaker and Calvert (2005) examined discourse and disclosure in weblogs, finding that in general, the bloggers in their study presented themselves realistically, using the web-logs to discuss world issues while attaching their real-world identities to the discussions. The web-logs seem to provide users with opportunities to express their identities they feel unable to express in their every day lives (Huffaker & Calvert, 2005).

To summarize, a small body of research has explored motives for health/support communities online. However, a literature search identified only one study that examined

blogger motives, and no research on motives for participation in mental health/support related bloggings. Thus, the first two research questions address motives:

RQ1: What motives drive members to join pro-ana bloggings?

RQ2: How will the nine blogging participation motives differ from one another?

Pro-Ana Blog Use: Psychological and Social Factors

A central part of uses and gratifications theory emphasizes how individual needs influence media use choices geared towards need gratification (Wright, 2002). Previous literature indicates that motives for Internet use are influenced by social and psychological factors (Papacharissi & Rubin, 2000). Therefore this study attempted to identify possible connections between user social and psychological factors and motives for pro-ana blog use.

Drive for Thinness and Motives for Pro-Ana Blog Use

Throughout the literature researchers have identified a high drive for thinness among those with eating disorders (Garner et al., 1983; Jackson et al., 2005). However, those with eating disorders have considerable psychological variability (Garner et al., 1983), and the varying degrees of drive for thinness may impact pro-ana blogging participation. According to researchers (Garner et al., 1983) disturbances to one's drive for thinness are central to anorexia, in a study of individuals clinically diagnosed with anorexia nervosa, the mean DT score was 15.4. It is important to note that although the researchers (Garner et al., 1983) did find DT scores were highly correlated with the disorder anorexia nervosa, the researchers also suggested that high DT scores may also be present in other groups of dieters.

A strong correlation exists between drive for thinness (e.g. excessive concern with dieting, fear of gaining weight, extreme preoccupation with desire to be thinner) and eating disordered behaviors (Garner et al. 1983; Vervaet et al., 2004). Given that individuals are often motivated to use the Internet to reach personal goals (Stafford & Gonier, 2004), it stands to reason that drive for thinness levels, which indicate the strength/pervasiveness of the goals related to ‘achieving thinness,’ may impact motives for blogging participation. Therefore, the present study asked the following:

RQ3: How do the nine motives relate to DT scores?

Body Mass Index and Motives for Pro-Ana Blog Use

Body mass index (BMI) is a measurement which takes height, age, and gender into account, when determining how healthy a persons’ weight is (Centers for Disease Control and Prevention, 2006). Rich (2006) suggests that the discourse around eating disorders (both inside and outside of the medical community), focuses heavily on medical/visual aspects of the disorders, and downplay, or ignore the social/emotional dimensions. According to this argument, a persons’ BMI may be considered a major indicator of severity and/or presence of an eating disorder. Therefore, the lower a persons’ BMI, the closer the persons ‘external eating disordered identity’ is to clinical/societal images of what an ‘eating disorder is.’ Concurrently, the higher a persons BMI, the farther the persons ‘external eating disordered identity’ may be from the clinical/societal image of ‘what an eating disorder is.’

Previous research suggests that those with eating disorders often have limited senses of selves, and that their identities are largely based on their eating disorder

(Claude-Pierre, 1997). Therefore, it seems that having an ‘internal eating disordered identity’ while lacking the ‘external eating disordered identity’, may create identity confusion, and heighten feelings of being unconnected, unsupported, and misunderstood. According to Huffaker and Calvert (2005) people keeping online journals on internet forums such as weblogs, may feel empowered because of the opportunity to disclose ‘exactly’ who they are, and reveal their thoughts and feelings, without having to hide behind a public facade (Huffaker & Calvert, 2005). Individuals may seek alternative avenues through which to foster, or express, their eating disordered identities, which may seem to be invalidated by society.

The less an individual feels that their ‘external appearance’ aligns with their internal identity, the more they may look to strengthen, create, or validate their ‘eating disordered’ identity online. Furthermore, participation on a pro-ana blogging, and belonging to something, included with other sufferers, may appeal to those who feel their experience with eating disordered thoughts/feelings/behaviors are ignored and invalidated by the societal/clinical focus on visual aspects of the disorders. Considering the medical/visual understanding of eating disorders, it stands to reason that a person’s BMI, as a major indicator of external eating disorder characteristics, would impact blogging participation motives. Therefore, the present study asked the following:

RQ4: How do the nine motives relate to BMI scores?

*Social Support Satisfaction and Motives for Pro-Ana Blog Use**Social Support Satisfaction and Motives for Pro-Ana Blog Use*

Social support satisfaction has to do with one's perception of how likely others are to provide support if it is needed (Dolbier & Stenhardt, 2000; Pierce, Sarason, & Sarason, 1991). Results throughout the literature have indicated that those who are unsatisfied with face-to-face social support may be motivated to join Internet groups for support and affiliation purposes (Houston et al., 2002; Reeves, 2000; Ridings & Gefen, 2004) to compensate for aspects of support lacking from face-to-face relationships (Papacharissi & Rubin, 2000; Reeves, 2000; Turner et al., 2001; Wright, 2000). Those with eating disorders often feel unsatisfied with their social support (Jackson et al., 2005; Okon et al., 2003), and report feeling isolated and unconnected within their social network (Belangee et al., 2003; Chassler, 1997). The ability for people to discuss difficult topics, or topics they do not feel will be understood in their face-to-face networks through computer mediated communication (Reeves, 2000), may be particularly appealing to those with eating disorders.

Furthermore, literature suggests that individuals are less likely to disclose if they fear that the disclosures will not be understood, lead to rejection, or will elicit judgments (Derlega et al., 2004; Sprecher & Hendrick, 2004). A pro-ana blogger could be satisfied with face-to-face support, but the blogger could still believe that disclosing about this particular aspect of their identity would not be understood, and they may choose to disclose among blogging participants for support, despite satisfaction with face-to-face social support. Internet support groups may provide users with a sense of social support

and empathy by offering a deeper understanding of fears, feelings, and family reactions associated with the illness that their face to face network may not be able to provide (Turner et al., 2001).

Based on previous literature which indicates that those discussing difficult topics, or topics they fear disclosing, may find Internet communications particularly appealing, we asked the following two research questions:

RQ5: How do face-to-face social support satisfaction scores differ from blog social support satisfaction scores?

RQ6: How do the nine motives relate to social support satisfaction?

Chapter Two

Method

Participants

Respondents were 134 participants enrolled in pro-anorexia bloggings on an Internet web-log community. Their average age was 20.5 (range = 18 to 35 years), and all respondents were female. The body mass index (BMI) ranged from 15.55 to 58.78, with a mean of 22.1. Of the participants, 19.1% were underweight (BMI < 18.5), 64.9% were of normal weight (BMI 18.5-24.9), 10.6% were overweight (BMI 25.0-29.9), and 5.3% were obese (BMI \geq 30). However, the average drive for thinness (DT) score was high, 17.17 (on a scale of 0-21).

Respondents reported an average of 11.1 month membership length (range = 0 months to 6 years), and an average of 13 hours of total blogging participation (e.g. posting, commenting, reading blogs or comments) per week (range = 1 to 80 hours, SD = 13.83). Just over half (55.6%) of the respondents reported posting on their blog at least once a day (36.4% once a day, 19.2% more than once a day), nearly a quarter of the respondents 24.2%) said that they typically post on their blog every other day, and 20.3% reported posting on their blog once a week or less.

Nearly all (92.8%) of the sample said that they had at least the equivalent of a high school education (29.6%, high school graduate/GED; 40.8 %, some college; 17.3%, college degree; 1.0%, some graduate school; and 4.1%, graduate degree).

Over four fifths of the sample (83.5%) described themselves as White/Caucasian, 5.2% as Hispanic/Latino, 4.1% as Asian/Pacific Islander, 3.1% as Native American, 3.1% as African American, and 1.0% as other.

Procedure

The researcher created a blog that included a brief description of the study, and link to the online survey site. The blog was active for approximately three months (early-June to early-August, 2006). To make the blog accessible to pro-ana blogging participants the researcher's blog was enrolled in 20 pro-ana bloggings. By clicking on the link, bloggers were taken to the online consent form (refer to Appendix A). Bloggers who were 18 or older and who agreed to participate, were then taken to the cross-sectional online survey (refer to Appendix B).

Measures

Open-ended motives. Motives for joining were assessed with an initial open-ended question, 'Why did you initially join the pro-ana blog group?' (Gratifications from participation were also assessed with an open-ended question, but responses were nearly identical, so those results are not reported here). The open-ended coding scheme to assess motives for joining contained twelve motives. (Refer to Appendix C) The open-ended coding scheme included the nine motives assessed in the closed-ended scale (document their lives, catharsis, form and maintain community forums, social/emotional support provision, social/emotional support attainment, information provision, information attainment, ego-protection and identity development). After examination of the responses, three additional motives were identified and incorporated into the coding

scheme (to obtain motivation to reach goals, for friendship, and for social comparison purposes).

Prior to coding the actual responses, the coders were first trained to identify and categorize responses with verbal instruction and practice sets. Verbal instruction included introduction to the twelve motive categories, their definitions and examples. To practice coding, coders were instructed to code two sets of twenty sample responses. Coders independently coded the sample sets, and discussed discrepancies after both the first and second set. After the training, the researcher and a second coder categorized all responses to the open ended question, and a third coder resolved differences. Percent agreement was 85%. Inter-observer reliability, Cohen's Kappa, was .76.

Closed-ended motives. Motives for blogging participation were assessed with 27 questions that measured nine motives, with three 'reasons' each: *Community Forum* (e.g. blogging in a community where members have similar interests and concerns), *Document My Life* (e.g. keep a personal record, update others about activities), *Catharsis* (e.g. emotional release through writing down feelings and thoughts), *Obtain Emotional Support* (e.g. caring, empathetic comments, support through rough times), *Obtain Informational Support* (e.g. getting information from others to answer my questions, acquiring new knowledge from other bloggers), *Provide Emotional Support* (e.g. assist others going through difficult times), *Provide Informational Support* (e.g. offer information to others when they need it), *Identity* (e.g. help strengthen pro-ana related identity/characteristics), *Ego-protection* (e.g. avoid being labeled as ill or sick because of ana-related lifestyle choices). Users rated each item, on a scale from 1 (not at all) to

5 (completely), in regard to how similar the item was to one of their reasons for pro-ana blogging participation.

Internal reliabilities (Cronbach's alpha) were computed for the nine motives measured with closed-ended items. The reliabilities for the motives measures, and the three items used to assess each motive are reported in Table 1.

Blogger participation. The blogger participation scale contained six questions to assess blog participation. Five of these questions measured frequency of use factors related to posting, reading others blogs, commenting, and receiving comments, and one question assessed blog participation (total time) in an average week. The sixth question was used to determine how the user would feel if no one left them any comments all week.

Drive for thinness. The Eating Disorder Inventory-Drive for Thinness (EDI-DT) scale (Garner et al., 1983) consisted of seven questions that assessed the level of preoccupation and excessive concern with dieting and weight (desire to lose weight and fear of gaining weight). Participants were asked to rate their level of preoccupation/ level of concern about, various eating and weight related situations (on a six point scale from 1, never to 6, always). The most extreme response (the answer that represents the choice most representative of eating disordered behaviors/thought patterns) is scored 3; the next most extreme response is scored 2; the next most extreme response is scored 1; and the three least extreme (those that are the least representative of eating disordered behaviors/thoughts) are scored zero (0).

Table 1

Internal Reliabilities for Participation Motives

<i>Motives</i>	<i>Items</i>	<i>Cronbach's α</i>
Provide Information	<ol style="list-style-type: none"> 1. provide information that will assist others 2. give people new ideas about how to reach their goals 3. provide helpful information to other blog members 	.91
Provide Social/Emotional Support	<ol style="list-style-type: none"> 1. encourage others 2. support others who are going through a tough time 3. let others know I understand how they feel 	.67
Document Life	<ol style="list-style-type: none"> 1. keep track of my personal habits 2. inform others about what is going on in my life 3. document my life so I can reflect on it 	.64
Catharsis	<ol style="list-style-type: none"> 1. release tension through writing 2. work out my issues through posting on my blog 3. express my feelings through posting on my blog 	.79
Identity	<ol style="list-style-type: none"> 1. develop a sense of who I am 2. help me strengthen my pro-ana characteristics/identity 3. reinforce my commitment to the pro-ana lifestyle 	.70
Obtain Information	<ol style="list-style-type: none"> 1. solicit new ideas or information about how to be a "better ana" 2. get feedback from other members about what I could change about my diet and exercise so that I can reach my goals 3. receive feedback on how I keep my eating behaviors from interfering with my relationships with family and/or friends 	.68
Ego-protection	<ol style="list-style-type: none"> 1. avoid being labeled as ill or sick because of my ana-related lifestyle choices 2. open up about my eating-related attitudes and behaviors without feeling like I will be reprimanded because of my choices 3. discuss my lifestyle without having to justify my ana-related choices 	.64
Community	<ol style="list-style-type: none"> 1. be a part of a community where we all understand one another 2. connect with others similar to me 3. belong to a community where I feel that I can be myself and still be accepted 	.84
Obtain Social/Emotional Support	<ol style="list-style-type: none"> 1. receive support when I am going through a tough time 2. receive encouragement from people who understand what I am going through 3. have people who will listen to how I feel and support me without judgment 	.61

The total score is the sum of points for all seven items on the scale; scores can range from zero to 21. The higher the score is on the scale, the higher the ‘drive for thinness.’

For example, consider the item: “I eat sweets and carbohydrates without feeling nervous.” If the participant chose ‘never’ the question would receive a 3, ‘rarely’ is scored with a 2, ‘sometimes’ is scored with a 1. If the participant chose ‘always,’ ‘usually,’ or ‘often,’ the question is scored with a zero.

Another example item is: “I think about dieting.” In this case if a participant chose ‘always’ it is scored with a 3, ‘usually’ is scored with a 2, and ‘often’ is scored with a 1, while the remaining three, ‘sometimes, rarely, never’ (the least representative of eating disordered behaviors/thoughts) receive a score of zero.

Body Mass Index. According to the Centers for Disease Control and Prevention (2006), Body Mass Index (BMI) is a number calculated from a person’s height and weight, which reliably indicates body fatness for people, as well as whether a person’s weight may pose a health risk for them. BMI is calculated with the following standard formula: $[703 \times \text{weight (lb)}] / \text{height (in)}^2$.

Weight status is separated into four different weight categories, each represented by a BMI range. According to the Centers for Disease Control and Prevention (2006), people are underweight if they have a BMI under 18.5, normal weight if their BMI falls between 18.5 and 24.9, overweight if their BMI falls between 25.0-29.9, and obese if their BMI is 30 or higher.

Chapter Three

Results

Research Question 1

Data related to the first research question, ‘What motives drive members to join pro-ana bloggings?’ are reported in Table 2. When analyzing the open-ended responses, results were based on the percent of respondents whose answer included one or more response associated with each of twelve broad motive categories.

Table 2

Motives for Joining Pro-Ana Bloggings

<i>Motives</i>	<i>Percent</i>
Provide Information	0.0
Provide Social/Emotional Support	1.5
Social Comparison	1.5
Document Life	3.0
Catharsis	3.7
Create/Strengthen Identity	8.2
Obtain Information	12.7
Friendship	13.4
Ego-protection	14.9
Motivation to Reach Goals	23.1
Community	29.1
Obtain Social/Emotional Support	59.0

Note. The percents are based on N = 134.

As Table 2 shows, there was a wide variety in regard to how commonly each of the 12 motives were reported as driving decisions to join. Results are reported in order of importance; from the most commonly reported motives to the least commonly reported motives. Example responses (including original spellings, grammar, etc) are included to help capture the essence of the various participation motives.

Well over half of the respondents joined to obtain social/emotional support. This dominant motive for joining was reported at nearly twice the frequency of any of the remaining 11 motives. Examples include:

“For help and support.”

“For support. To not feel so alone.”

The second most common reason for joining, reported by nearly one third of the participants, was community, for example:

“It's somewhere where you fit in.”

“I'm ana and it is difficult sometimes for the obvious reason, no one can really associate with it except those that have it. Joining a pro-ana blog group was the best thing I could possibly do!!”

Often, participants joined for both ‘community’ and ‘social/emotional support,’ for example:

“...I wanted to find others who had eating disorders. Groups would offer me support that I didn't seem to find from those who do not have an eating disorder”

“I joined the pro-ana blog group so that I could talk to others who relate to what I am going through...it's just nice to know that there are other people who are going through the same thing I am and know how i feel.”

While slightly less common than community, joining to obtain motivation to reach goals was still one of the main factors in respondents decisions to join. Nearly a quarter of the participants joined in hopes that their blogging participation would motivate them to reach their goals, for example:

“Because it keeps me motivated and on track with my diet and exercise program.”

“...motivation to lose more weight.”

Three motives for joining, ego-protection, friendship, and to obtain information, were reported less often and by approximately the same percentage (12-15%).

Examples that highlight the ego-protection motive include:

“...It's for people with ed's...who won't get judged for there thoughts.”

“...so that i could have someone to share my problems ... (that) wouldn't judge me.”

Those who hoped to gain friendship reported joining for reasons such as:

“to make friends”

“to find friends”

Participants seeking information reported joining for reasons such as:

“for tips”

“to get tips and info on how to lose weight”

A slightly less common reason for joining was to create or strengthen identity, which was reported by eight percent of the respondents. For example:

“ i read about it in a mag and the mag gave the webiste! so i looked and it and it seemed like a completely different lifestyle to mine and as I was so bored with my life, I experimented.”

Finally, four motives, catharsis, document life, provide social/emotional support, and social comparison, were each reported by fewer than 4% of the respondents.

Respondents were driven to join less for those four reasons than all of the other motives, aside from to provide information, which was not reported by any of the participants.

The following illustrations these reasons for joining: catharsis, “this way I can at least get what I am thinking and feeling out” document life, “to have somewhere to post my habits” provide social/emotional support, “to be in contact with other people who understood what I was going through and needed support just like I did” and social comparison, “to find others like me and to see how much they weigh.”

Research Question 2

The second research question was concerned with differences among respondents’ motives for participation in the bloggings. The data to address this question are derived from respondents’ ratings of nine motives, based on 27 closed-ended questions. A repeated measures analysis of variance (ANOVA) was used to compare the nine motives. The ANOVA determined that there were significant differences among the motives, $F(8,792) = 63.73, p < .01$. Results from comparison of the nine means (Tukey’s post hoc analysis), are displayed in Table 3.

In general, findings indicate that the most common motives for pro-ana blogging participation are to obtain emotional support, belong to a community, and for ego-protection purposes. As Table 3 shows, although these three motives did not differ significantly from each other, all were significantly higher than the means for the remaining six motives.

Table 3

Motives Driving Participation in Pro-Ana Bloggings

Motives	Mean	Standard Deviation
Create/Strengthen Identity	2.80 a	1.19
Provide Information	3.00 ab	1.30
Obtain Information	3.33 bc	1.05
Document Life	3.50 cd	.95
Provide Social/Emotional Support	3.75 de	.95
Catharsis	3.89 e	1.01
Ego-protection	4.31 f	.84
Obtain Social/Emotional Support	4.47 f	.95
Community	4.51 f	.72

Note. N= 100. Means with no subscripts in common differ significantly at $p < .05$, by the Tukey procedure.

Catharsis was also an important factor in driving blogging participation. Although there was no significant difference between this motive and participation to provide social/ emotional support, catharsis motivated participants significantly more than the four least important participation motives (i.e., document life, obtain information, provide information, and create/strengthen identity).

The results also indicated significant differences between the four motives that were least important to blogging participation. Although there was no significant difference between documenting one's life and obtaining information, participants reported being driven significantly more to document their lives than to provide information or create/strengthen their identity. In fact, identity, the least important motive, drove participants significantly less than any other reasons, except for participating to provide information.

Research Question 3

Research question three asked about how 'Drive for Thinness' (DT) was related to blogging participation motives. Garner and colleagues (1983) found the DT scale to be highly correlated with total EAT-26, which is a reliable and valid assessment to test for the presence of the symptoms of anorexia. On average, participants' DT scores were high, with a mean of 17.17, on a scale from 0 to 21 (SD = 3.76). This indicates a fairly extreme preoccupation with weight and diet, desire to lose weight, and fear of gaining weight among blog participants.

The relationships between motives and DT were investigated by calculating Pearson correlations. Results are reported in the first column of Table 4.

Table 4

Correlations between Motives and Drive for Thinness and Body Mass Index

Motives	Drive for Thinness	BMI
Create/Strengthen Identity	.08	.23*
Provide Information	-.09	.27**
Obtain Information	.08	.20
Document Life	-.12	.18
Provide Social/Emotional Support	.08	.21*
Catharsis	-.02	.11
Ego-protection	.29**	.06
Obtain Social/Emotional Support	.20	.21*
Community	.25*	.13

* $p < .05$ ** $p < .01$

The analyses indicated that the respondents' DT levels were significantly correlated with two of the nine blogging participation motives. The ego-protection motive was the strongest correlate of DT level ($r = .29$, $p < .01$) followed by the community motive ($r = .25$, $p < .05$). This means that the higher participants' drive for thinness, the more likely they were to seek ego-protection and a community to belong to through their blogging participation.

Research Question 4

The relationship between blogging participation motives and body mass index (BMI) was the focus of the fourth research question. In the present study, the average

BMI among participants was 22.09 (SD = 5.91), which according to the Centers for Disease Control and Prevention (2006), represents a normal weight for a given height. Correlation analysis revealed BMI was significantly correlated with four of the nine participation motives. Results are displayed in the second column of Table 4.

The strongest positive relationship was between BMI and providing information motive ($r = .27, p < .01$). BMI was also significantly related to the following motives: to obtain social/emotional support ($r = .21, p < .05$), identity ($r = .23, p < .05$), and to provide social/emotional support ($r = .21, p < .05$). The higher participants' BMI, the more they were likely to be driven to provide information and social/emotional support, to seek social/emotional support, and to use their blogging participation to strengthen/create their identity.

Research Question 5

To answer the fifth research question concerning the difference between blogging social support satisfaction and face-to-face social support satisfaction, a paired sample t-test was run. The results indicated that overall, participants reported being significantly less satisfied with face-to-face social support ($M = 2.16, SD = 1.16$) than with social support stemming from their blogging participation ($M = 4.48, SD = .719$), $t(98) = -16.36, p < .001$.

Research Question 6

Research question six asked how participants' social support satisfaction levels (with both blogging and face-to-face networks), related to participation motives.

Correlation analysis revealed significant relationships between social support satisfaction and participation motives (see Table 5).

Table 5

Correlations between Motives and Social Support Satisfaction

Motives	Face-to-Face Support Satisfaction	Blog Support Satisfaction
Create/Strengthen Identity	-.16	.10
Provide Information	-.08	.17
Obtain Information	-.10	.13
Document Life	-.13	.06
Provide Social/Emotional Support	-.17	.28**
Catharsis	-.21*	.08
Ego-protection	-.09	.18
Obtain Social/Emotional Support	-.08	.26**
Community	-.18	.35**

* $p < .05$ ** $p < .01$

Findings indicated that participants' face-to-face and blogging social support satisfaction levels both related to participation motives, but in different ways. Face-to-face social support satisfaction was significantly correlated with only one participation motive, catharsis. This relationship was negative ($r = -.21, p < .05$). This means that

blogging participants who reported being less satisfied with their face-to-face social support participated more on the blogging for catharsis.

The level of blogging social support satisfaction was a significant correlate of three out of the nine participation motives. Specifically, levels of blogging social support satisfaction strongly and significantly correlated with participating in the blogging to obtain social/emotional support ($r = .26, p < .01$), to provide social/emotional support ($r = .28, p < .01$), and to form/maintain community ($r = .35, p < .01$). This means that the more respondents were driven to participate in the blogging for social/emotional support exchange and community reasons, the more satisfied they tended to feel with the social support from the blogging.

Chapter Four

Discussion

The purpose of this research was to examine, based on first-hand accounts of blogging members, the reasons for participating in pro-ana bloggings, while considering the ways in which individual psychological/social needs may influence individual participation motives. In general, the findings indicate that weblog technology is used to meet individual needs, and that social/psychological factors do play a role in the way this technology is used. Discussion of the results will follow the major research questions of the study.

Blogger Motives

The first two research questions were concerned with blogger motives. The first research question addressed the reasons for joining the pro-ana bloggings. The data for this question were derived from open-ended responses. The second research question was concerned with differences among participation motives, as reported on the closed-ended scales. The results showed that reasons for blogging participation closely paralleled the reasons for joining reported in open-ended responses. Of the nine open and closed-ended participation motives, the three dominant participation motives match the three most common reasons for joining. Specifically, results indicate that more than any other reason, members of pro-ana bloggings reported using their participation to obtain emotional support, a sense of community, and for ego-protection. The importance of obtaining social/emotional support in decisions to join as well as participate in the bloggings, parallels earlier research by Ridings and Gefen (2004), who found social

support acted as a primary motive for joining virtual health/support groups. Additionally, the finding that community was an important part of bloggers decisions to join as well as participate in the blogring, supports past research that indicates inclusion is a major interpersonal motive (Ridings & Gefen, 2004; Rubin, Perse, & Barbato, 1988).

Consensus throughout the eating disorder literature is that an eating disorder is a serious physical and emotional problem (National Eating Disorder Association, 2002), and that sufferers often feel unsupported, unconnected, guilty and ashamed (Belangee et al., 2003; Chassler, 1997). Yet, despite the fact that the psychological aspects of the disorders are well documented throughout the literature, according to Rich (2006) the medical/visual components of the disorders tend to be emphasized, while the social/emotional dimensions of the disorders are often ignored or downplayed. In the present study, the need for social/emotional support and community were the two main participation motives, and were also reported most frequently by respondents as driving decisions to join.

In regard to eating disorders, the tendency to downplay the social/emotional dimensions and treat the disorders as mainly weight issues (Rich, 2006) may partially explain the high drive for community and social/emotional support among bloggers in the present study. Ridings and Gefen (2004) suggested that people may join virtual communities to fill social voids that exist in their conventional communities. It seems that lack of social support within one's conventional community may create 'social voids,' and decisions to join the pro-ana bloggings may reflect attempts by individual sufferers to fill those social voids. This interpretation is further supported by past

literature which emphasizes the importance of being a part of a social network (Dolbier & Stenhardt, 2000) inclusion/belonging as major interpersonal motives (Ridings & Gefen, 2004; Rubin et al., 1988)

Aside from community and emotional support, ego-protection was also a primary motive for participating in the bloggings, and was also mentioned frequently as a reason for joining. The high drive for community, social/emotional support and ego-protection may reflect the stigma surrounding eating disorders in society. Past research has indicated perceptions about personal characteristics of a person with anorexia nervosa were often negative. For example, researchers have found that people often perceive eating disorders as self-inflicted, and those with the disorders as ‘acting’ that way for attention, ‘to blame’ for the condition, and irrational (Rich, 2006; Stewart, Keel, & Schiavo, 2006).

According to Rich (2006) the stigmatization surrounding eating disorders often makes sufferers feel misunderstood, alienated or disconnected, and these feelings lead them to seek sanctuary and support from other sufferers. Consistent with this view, in the present study, individuals with the stigma of an eating disorder may be choosing to self-disclose among similar others on the pro-ana bloggings as a means to address the stereotypes surrounding the disorders and gain support. Weiser (2001) argued that social Internet use may be valuable for individuals who fear the consequences of revealing certain aspects of their identities, in that it may make individuals feel freer to share those aspects of their identities. McKenna and Bargh (1998) argued that self-disclosing among similar others can help provide social validation of one’s beliefs and feelings, and help people

feel less isolated and different by fostering a positive group identity or helping them to feel better about their stigmatized identity.

Bonnesen and Hummert (2002) argued that self-disclosures motivated by ego-protection may be used in order to justify or explain problems or weaknesses that are often stereotyped by others. In the present study, the decision to disclose through pro-ana bloggings appears to have been motivated, in part, by ego-protection. In society, disclosing about eating disorder related thoughts or feelings (when not yet in recovery) may reflect individuals' desire to justify, or feel better about the eating disordered aspects of their identities.

In the past, researchers have suggested that bloggers are primarily seeking gratifications which stem from the literal act of posting on one's blog. For example, Nardi and colleagues (2004) suggested that catharsis and to document life were primary motives for bloggers. Contrary to this view, findings from the present study indicated that decisions to participate in the pro-ana bloggings were driven primarily by motives such as social/emotional support, community and ego-protection, and that motives such as catharsis and to document life were significantly less important to bloggers. Whereas joining for catharsis and document life indicate that gratifications stem from the literal act of posting on one's blog, social/emotional support, community and ego-protection in indicate that gratifications stem from others.

These findings suggest that when one posts on a blog it is indeed a form of self-disclosure, in that the decision to post is driven by the idea that a community of supportive, non-judgmental others will be reading the posts, significantly more than by

the literal act of writing. This interpretation offers support for the argument (Fox et al., 2005) that being in a community of like others creates a more comfortable atmosphere for self-disclosure due to the emotional support and non-judgmental atmosphere it affords. Furthermore, findings offer support for that participants are primarily driven to have needs gratified by others, as opposed to seeking need gratification from the literal /technical act of writing/posting on one's blog, offers support for the argument made by Hevem (2004), that posting on one's blog is an act of social positioning with the potential to promote communication between the blog authors and blog readers.

Throughout the literature, information exchange has been positioned as a dominant motive among internet users (La Coursiere, 2001). In fact, research by Ridings and Gefen (2004) indicated that in online health/support groups 'information exchange' and 'social support' were both primary motives, driving an equal amount of the participant's decisions to join. Contrary to these findings, that present study found that, not only were information exchange motives significantly less important to blogging participants than social/emotional support motives, but information exchange motives were among the least important reasons for joining as well as participating in the bloggings. These findings may be partially due to the gender of the respondents (all female). Past research has indicated that women are more likely to practice social/emotional support seeking behaviors, whereas men are more likely to gear usage behaviors towards information seeking (Owen, Klapow, Roth, & Tucker, 2004; Wright, 2002).

Also contrary to past research which has indicated that identity formation is an important function of web-log use (Huffaker & Calvert, 2005), in the present study, the

need to create or strengthen identity was the least significant reason for blogging participation, and was also mentioned infrequently as a reason for joining a pro-ana blogging. Despite these findings, it is important to note that low drive to create /strengthen identity does not necessarily indicate that bloggers do not find their 'identity' important. Rather when considered with the high ego-protection drive, it may suggest the opposite. Specifically, these findings seem to suggest participants desire to be included and accepted for their identities and joining the blogging is a way to 'protect their identity' rather than a way to create or strengthen their 'ana identity.'

While the findings concerning the nine motives assessed in the analysis of both the closed-ended (reasons for participation) and open-ended (reasons for joining) responses closely paralleled one another, some differences between the three primary motives should be discussed. In regard to participation community, social/emotional support, and ego-protection motives, were equally important to bloggers, whereas respondents indicated joining the bloggings for social /emotional support far more frequently than community or ego-protection. These differences between the primary motives may partially reflect the method. Whereas, reasons for joining were assessed with one open-ended response, reasons for participation were assessed with closed-ended measures.

Past researchers (Colvin, Chenoweth, Bold & Harding, 2004) defined 'support' as shared common experiences, emotional support, encouragement, and nonjudgmental acceptance from others who understand. In the present study, perhaps bloggers reported joining for social/emotional support most often because reasons for joining, such as community and ego-protection, seemed to fall under the broad umbrella of support. For

example, respondents may have viewed a non-judgmental community of like others who will offer understanding and acceptance, as important aspects of social/emotional support.

In addition to the nine motives that were also assessed with the closed-ended scale, three additional motive categories were included in the open-ended coding scheme to assess motives for joining; motivation to reach goals, social comparison, and friendship/socialization. Motivation to reach goals was the third most frequently reported reason for joining the bloggings, reported slightly more often than ego-protection, and about half the frequency of community motives. Ridings and Gefen (2004) suggested that people often use the internet for information to aid in goal achievement. Interestingly, in the present study, participants were seeking motivation to reach their goals more frequently than information. With access to multiple sources of information on the web, it seems that individuals can access information easily and quickly through resources other than bloggings. In the present study, the findings indicate that bloggers were seeking something non-tangible, such as encouragement, willpower, or motivation from others, rather than information.

Past research has indicated that social support and friendship are often primary motives among Internet users in general (Stafford & Gonier, 2004), yet among online support/health group participants social support exchange seems to be more important than friendship (Ridings & Gefen, 2004). For example, Ridings and Gefen (2004) explored motives for joining a variety of online communities. They found that across all Internet communities studied, respondents' friendship motives were reported at about

twice the frequency of social support exchange motives, whereas among health/support community participants specifically, social support exchange was reported at about twice the frequency of friendship. In the present study, friendship was the fifth most frequently reported reason for joining, whereas social/emotional support was the most commonly reported reason for joining. These findings offer support for the idea that pro-ana bloggings function similarly to online support groups, and support past research, which indicates that pro-ana sites tend to follow structures similar to other sites which are devoted to health-related discussions (Mastronardi, 2003).

In the present study, the low frequency of respondents who indicated joining for social comparison purposes may be partially explained by past research (McKenna & Bargh, 1998) which indicated that people with stigmatized identities often join groups of others with shared identities in order to reduce uncertainty and foster positive group identity. Specifically, in the present study, joining for social comparison indicates the desire to measure oneself against other members within the group, which would seem to conflict with the desire of blogging participants to reduce uncertainty, feel normal, find acceptance and belong.

In sum, results suggest that bloggers' decisions to join as well as participate in the pro-ana bloggings are primarily motivated by socially oriented/group membership-related goals, rather than simply the desire to 'blog' for the literal act of posting on one's blog. Although gratifications from literally writing on the blog may be sought, gratifications from 'others' are primarily driving decisions to join and participate in the bloggings. When an individual joins a blogging they are choosing who they will disclose to, and

results suggest that pro-ana blogging participants are making decisions based primarily on a desire to self-disclose among a community of like others where they will be supported, understood, encouraged to reach their goals, and not judged.

The Impact of Social and Psychological Factors on Motives

Research questions three through six were concerned with relationships between blogging participation motives and psychological-social factors. Specifically, these questions addressed the ways in which individuals' participation motives related to their Drive for Thinness, Body Mass Index, and face-to-face and blogging social support satisfaction, as well as the difference between face-to-face and blog support satisfaction. Out of the nine participation motives BMI was positively related to four, blogging social support satisfaction was a positive correlate of three, DT was positively associated with two, and face-to-face social support satisfaction was negatively related to one.

Drive for thinness. The third research question was concerned with the relationship between DT and participation motives. Results showed that the higher an individual's DT (i.e., the more they reported being pre-occupied with/concerned with weight, food, and body issues) the more they tended to seek community and ego-protection. DT was unrelated to the other motives for participation.

To understand the relationships between DT and participating for ego-protection and community, it may be helpful to think of DT in terms of 'deviance from the norm.' The higher a person's DT, the further he/she is from the 'healthy/norm' in regard to food/body attitudes, behaviors and beliefs, and the more socially deviant the person may be considered if the person were disclose that information. Bonnesen and Hummert

(2002) suggested that the more a self-disclosure violates the ‘norms of self disclosure,’ the more likely the disclosure and the information disclosed may be viewed negatively. Theoretically, the higher an individual’s DT score is, the more deviant from the norm, that person’s thoughts and behaviors are considered. It may be that the more extreme, or severe a person’s eating disordered thoughts and behavior patterns are, the more likely disclosing about such things would elicit negative judgments, unless the disclosures were to others with similar issues. Thus, participating in a pro-ana blogging for community and ego-protection may represent a way to decrease variance from the norm (in terms of self-disclosures), and thereby reduce the threat of judgment and stigmatization and increase feelings of being normal, included, and accepted. Support for this interpretation may be found in Atkin’s (1985) suggestion that when people’s attitudes, behaviors, or practices that are ‘guilt inducing’ or considered ‘socially deviant,’ they may gear media choices towards eliminating uncertainty about the ‘unacceptability’ of their behaviors, reducing guilt, or distorting the normative standards.

In sum, it seems likely the higher a person’s DT score, the more that individual may fear that self-disclosing about related topics (e.g. eating disordered attitudes or behaviors) will elicit negative reactions, or the more they may experience negative reactions to the disclosures if they do disclose. Thus, those with higher DT scores may be more likely to seek ego-protection and community through their participation in pro-ana bloggings.

BMI. The finding that no relationship existed between BMI and DT ($r = -.02$, $p = .84$) indicates that whether a person is normal weight, underweight, or overweight does

not relate to how prevalent and severe their eating disordered thoughts, feelings, attitudes and beliefs are. The general societal tendency to emphasize visual/medical cues in relation to eating disorders, to downplay social/emotional aspects, and to base evaluations about the severity of an eating disorders on visual aspects of the disorders (Rich, 2006), may help shed some light on possible reasons BMI was found to be related to the motives of identity, obtaining and providing emotional support, and providing information.

Based on Rich's (2006) assertion regarding the way eating disorders are regarded by society, it seems that the higher a person's BMI, the farther the person would be from society's 'visual' stereotype of what an eating disorder 'is' or what makes an eating disorder serious. Thus, when a person is experiencing the psychological stress of an eating disorder, the higher their BMI, the more uncomfortable the inconsistency between their physical and emotional selves may be. Past research has indicated that continuity with one's physical and emotional self is critical to identity (Huffaker & Calvert, 2005), which may explain why those with higher BMI's are driven more to participate in order to strengthen/create their identity.

According to Huffaker and Calvert (2005), the ability to provide and obtain social/emotional support through linking to other bloggers can help with identity construction by fostering a sense of peer group relationships. The increased sense of involvement and membership from providing and obtaining emotional support may be particularly important to those with higher BMI's. Furthermore, providing information may also be an important way for a person lacking visual indicators of their psychological selves, to declare commitment to the group.

Face-to-face and blogging social support satisfaction. Results indicated that participants were significantly more satisfied with blogging than face-to-face social support. The finding that participants were relatively unsatisfied with face-to-face support is consistent with past literature, which suggests that individuals with eating disorders often feel isolated, misunderstood, and unsatisfied with their face-to-face social support (Chassler, 1997, Jackson et al., 2005, Okon et al., 2003, Rich, 2000). Results are also consistent with the claim by Houston and colleagues (2002) that individuals participating in online support groups may have low social support in general.

The result that blogging participants were generally satisfied with blogging social support is consistent with previous findings, which indicate that social support may be best utilized in the context of computer mediated communication when the topics are difficult or uncomfortable to discuss, or may not be understood in participants' face-to-face networks (Papacharissi & Rubin, 2000; Reeves, 2000; Turner et al., 2001). These individuals may find posting on their blogs to be an alternative way to express their emotions.

Blogging social support satisfaction and blogger motives. The findings indicate that social/emotional support exchange and community motives were related to greater blogging social support satisfaction. This finding is consistent with past research by which suggests that internet based peer-to-peer communities have the ability to satisfy user needs (Eastin & LaRose, 2004), in that blogging participants who are seeking social/emotional support are finding it through their blogging participation.

Face-to-face social support satisfaction and motives. The negative relationship between face-to-face social support satisfaction and participating for catharsis may be explained in part by the diminished ability/willingness to ‘vent’ or talk about what one is feeling, when in less supportive relationships. Previous research indicates that those with eating disorders are often raised in families where emotional expression is discouraged, and they tend to have difficulty expressing emotions as adults (Okon et al., 2003). Conversely, it seems that those with more supportive families may feel better about expressing emotions in face-to-face contexts, and thus may not be as motivated to blog for catharsis as someone with a less supportive family.

Conclusions and Implications

The purpose of this study was to gain a better understanding of motives for pro-ana blogging participation, as well as to determine how individual social / psychological factors related to blogger motives. Understanding the reasons for blogging participation is crucial in the context of the growing numbers of pro-ana communities popping up on the web, the serious nature of eating disorders, and the potential outcomes associated with online community use.

The findings concerning the differences between participation driven by needs that could be gratified without others through the literal act of posting to one’s blog, and participation driven by needs that can only be gratified by others, may have particularly interesting implications. Specifically, findings that community, social support and ego-protection motives (seeking gratification from others), were significantly more important than the motives of catharsis and to document life (i.e., seeking need gratification through

the literal act of blogging), offers support for the interpretation of blogging as a practice involving self-disclosures.

Interestingly, the findings also suggest that pro-ana bloggers may not be that different from eating disorder support group members, or those in treatment centers for eating disorders. Rich (2006) suggests that eating disorders are both complex and contradictory in nature, and that individuals with the disorder often find support and sanctuary by communicating with other sufferers. She found that even while receiving treatment in a clinical setting, individuals with the disorders would fight recovery by engaging in practices such as hiding meals and engaging in extra exercise in attempt to burn additional calories, while at the same time they would give face-to-face compliance (in regard to recovery). The 'pro-ana' label affords bloggers the ability to address the 'can't live with it, can't live without it' relationship those with the disorder often seem to have.

This study offered evidence to suggest a link between motives for participation and gratifications stemming from that use. Blogging participants in general reported high levels of social support satisfaction with their blogging network, and the more driven individuals were to participate for social/emotional support exchange and community motives, the more satisfied they tended to be with the social support from blogging participation. Several studies have demonstrated how social support stemming from online group participation may have positive health and well-being outcomes for participants. For example, past research (Wright, 2002) has linked higher social support satisfaction from blogging participation to decreased stress and increased coping ability.

Other research has indicated that social Internet use can buffer against the effects of several mental illnesses such as post traumatic stress disorder, complicated grief (Vanderwerker & Prigerson, 2004) and depression (Houston et al., 2002). Based on these past research findings, it seems that increased social support satisfaction stemming from Internet participation could possibly help blogging participants cope with their eating disorders and/or buffer against the negative psychological /emotional effects of the disorders.

Furthermore, based on past research findings, it seems that pro-ana blogging participation may make bloggers more comfortable disclosing about eating disordered aspects of their identities to people in their face-to-face networks. For example, McKenna and Bargh (1998) suggested that people often refrain from disclosing about aspects of their identities that are stigmatized in society, out of fear of the negative reactions to the disclosures. The researchers found that for individuals with concealable marginalized identities, participating in an Internet group with others who share such identities, helped participants to decrease the internal conflict between marginalized self-aspect and societal standards, foster positive group identity, and increase self-acceptance. As a direct result of participation in the Internet groups, many of the participants revealed to their friends and family the aspects of their identities they had previously kept hidden (McKenna & Bargh, 1998).

As in the McKenna and Bargh (1998) study, in the present study, individuals may have felt the need to hide certain aspects of their identities, causing isolation from their face-to-face network. Blogging in the pro-ana blogging affords participants the

opportunity to connect with others who share stigmatized aspects of their identities, and participants in general feel they are gaining support and understanding through their participation. If indeed, blogging participation helps participants gain the courage and confidence to disclose to family and/or friends, as in the McKenna and Bargh (1998) study, those disclosures could potentially lead to real-time treatment or assistance with the disorder, and could have positive benefits to the health and well-being of the pro-ana bloggers.

While past research has often connected social Internet use to positive health/psychological well-being outcomes, other research has indicated that social Internet use may have negative outcomes for the Internet user. For example, past research has indicated that social use of the Internet may actually reduce social connectivity with one's face-to-face network, and have negative effects on psychological well being (Weiser, 2001). One ongoing problem throughout the literature is the lack of agreement over potential behavioral outcomes associated with media use (Greene & Krcmar, 2005). In the present study, although bloggers may have had their needs gratified, it is unclear how gratifications such as social support may affect the health and psychological well-being of pro-ana bloggers.

Findings concerning how BMI and DT are related to motives provide support for previous research (Atkin, 1985), which indicated that social norms play a role in motivating message selection for compensatory purposes. In the present study it seems that both higher BMI and higher DT could be viewed as deviation from social norms, but in different ways. Whereas individuals with higher BMI's may feel that their external

and internal selves are inconsistent, and that their weight excludes them from the ‘ana group,’ a higher DT may create dissonance between a blogger’s internal beliefs, feelings and attitudes, and societal ‘norms.’ Thus, a higher BMI may leave individual sufferers seeking ways to resolve their external and internal inconsistencies, while a higher DT may lead bloggers to resolve inconsistency between internal beliefs and social norms concerning healthy beliefs, attitudes and behaviors.

Limitations

Some limitations of this study need to be acknowledged. The first limitation in this study has to do with the reliance on self-reports. Specifically, respondents can misrepresent their identities, or answer based on what will make them ‘look the best.’ Thus, results may not accurately depict respondent’s feelings, ideas or behaviors. However, in the pro-ana blogging context, self-report surveys were the best way to reach blogging participants and obtain information about their motives for joining and participating. In the present study, gratifications obtained were not measured, but the motives or gratifications sought (e.g. community and social/emotional support exchange) correlated with social support satisfaction.

Another limitation has to do with the relative novelty of web-logs and the lack of any established measurement to assess motives for blogging participation. With different researchers using different methods it becomes hard to compare across studies.

The age of the respondents is another limitation in this study. According to the National Association of Anorexia and Related Disorders (2000), the vulnerability to eating disorders is at its peak between the ages of 11 and 17. In the present study all

respondents were 18 or older, and therefore outside of the peak ages of vulnerability for eating disorders. Thus, the findings may not represent younger users of the pro-ana blogring. In the present study, the age of participants may be reflected in the findings, in that respondents were primarily seeking support to deal with a pre-existing lifestyle/belief system, as opposed to seeking ways in which to acquire eating disorders, or become 'better at having' eating disorders. Younger individuals, still within the peak ages for eating disorder vulnerability, may participate out of curiosity, possibly seeking ways to foster rather than gain support 'ana' related beliefs/attitudes/behaviors.

The method by which participants were recruited may also be a limitation. It is impossible to know how many people saw the volunteer requests posted on the bloggings. Additionally, those who participate in the blogring more frequently may have been more likely to see the request.

Future research

Considering the life-threatening consequences of eating disorders, and the importance of early detection and treatment (National Eating Disorders Association, 2002), pro-ana blogring participation warrants further exploration. Despite the prevalence and severity of eating disorders, and the high number of pro-ana blogring participants, research concerning pro-ana blogring use is very limited, and there are many areas that may be beneficial to explore.

Throughout the literature, social support has been linked to both negative and positive health outcomes. For example, Weiser (2001) found that social use of the Internet may have negative effects on psychological well being, while, on the other hand

Wright (2002) found that among participants in an online cancer community, stress was lower for those with higher satisfaction with the on-line social support. According to Keski-Rahkonen and Tozzi (2005), empathetic understanding and support were the most important factors in the process of eating disorder recovery and supportive relationships were often considered to be the motivating force in the recovery process. In the present study, participants felt supported from the blogging relationships, yet the health effects of that social support are unknown. Future research should explore the behavioral and health effects of online social support among pro-ana blogging participants, and other Internet forums where 'pro-ana communities' exist.

Future research also should explore how, for people with eating disorders, blogging participation relates to face-to-face disclosures and comfort disclosing to people in a face-to-face network. McKenna and Bargh (1998) suggested that when aspects of people's identities are marginalized by society, participating in an Internet group may help them to feel better about their identity and conclude that their identity is more acceptable. The researchers found that as a direct result of participation in the Internet groups, many of the participants revealed their identities (identities that many of the participants had kept hidden for most of their lives) to family and friends (McKenna & Bargh, 1998). For pro-ana blogging participants, it is possible that being in a supportive community of like others will reduce shame and guilt over eating disordered behaviors and attitudes, possibly increasing the likelihood that bloggers will disclose to family or friends. Once friends or family become aware of their loved ones' struggle, they may be

able to assist by encouraging treatment, staging an intervention, or simply offering support.

This idea of an association between treatment and pro-ana blogging participation should be explored further. Considering the link between Internet group participation and increased likelihood of disclosing to ones face-to-face network (McKenna & Bargh, 1998), it is possible that blogging participation may actually increase the likelihood of obtaining treatment for bloggers. It is also important to recognize that just because a person is participating on a pro-ana blogging, it does not mean they are not currently in treatment. Rich (2006) found that many people currently in treatment for eating disorders gave face-to-face compliance for recovery, yet continued to engage in disordered behaviors. Pro-ana blogging participants could concurrently be in therapy, going to a nutritionist, or receiving some form of treatment for an eating disorder while at the same time participating in a pro-ana blogging. On the other hand, blogging participants could decide to stop outside treatment if they believe they have the support they need on the bloggings. Obtaining information about the treatment history of blogging participants (e.g., whether they are currently/were previously in therapy, and whether they started or ended therapy after joining), and learning how such factors relate to motives for participating in pro-ana bloggings would help professionals involved in the treatment of those with eating disorders to better understand the role that blogging participation may be playing in the recovery process.

Summary

Overall, the results of this study showed that the blogging participants were highly satisfied with the social support derived from their blogging participation, and relatively dissatisfied with their face-to-face support. Participants expressed very high preoccupation with food, body, and weight, yet on average respondents' had a BMI indicative of a healthy/normal weight for their height. Primary motives for participation reflect the importance of being understood, accepted and supported, while less important motives reflect needs that can be gratified without 'others.' Results support the idea that when blogging participants post on their blogs it is a form of self-disclosure. Finally, results indicate that individual psychosocial factors such as social support satisfaction (blogging and face-to-face), drive for thinness, and body mass index, are associated with blogging participation motives.

The 'pro-ana' title seems to reflect the paradoxical nature of eating disorders, and blogging participation may afford bloggers the ability to address the 'can't live with it, can't live without it' relationship those with the disorder often seem to have. Future research should explore the effects of this use on psychological, social and physical well being, as the next step towards unraveling the pro-ana phenomenon.

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APPENDIX A

Georgia State University
Department of Communication
Informed Consent

Title: “Pro-Ana” Web-log Uses and Gratification

Principal Investigator: Cynthia Hoffner

Student Investigator: Dana Mantella

You are invited to participate in this research study because you are a member of a pro-ana blog group. The purpose of the study is to examine pro-ana blog use. The study will take about 15-20 minutes of your time.

You are asked to complete a questionnaire online. This questionnaire asks about your reasons for keeping a pro-ana blog. It also asks about your eating attitudes and behaviors and your social support.

Because of the sensitive topic, you may feel mild unease when answering some of the questions. A list of resources is provided at the end of the questionnaire. Your help will provide us with important information that may help us understand reasons for pro-ana blog use. Although there were no direct benefits to the participants, the findings from this study may assist in further knowledge development related to computer-mediated communications and motives for virtual health community use. In practice, these findings may be used to assist health and wellness practitioners with understanding possible barriers to helping those with eating disorders.

You must be at least 18 years old to participate in this study. Participation is voluntary. You have the right to not be in this study. If you decide complete the questionnaire and change your mind, you have the right to stop at any time.

This research is anonymous and confidential. We will not be collecting any information that might identify you. The findings were summarized and reported in group form. You will not be identified personally.

If you have questions about this study, you may contact the researchers in the Department of Communication. Dana Mantella can be reached at 404-463-0570. Dr. Cynthia Hoffner can be reached at 404-651-3200. If you have questions or concerns about your right as a research participant, you may contact Institutional Review Board (IRB) at Georgia State University. The IRB oversees the protection of human research participants. Susan Vogtner of the IRB office can be reached at 404-463-0674.

I am 18 or older. I have read the above and agree to participate in this study.

APPENDIX B

****Questionnaire****

The following two questions refer to your reasons for pro-ana blog membership. Please answer as honestly and completely as possible.

1. Why did you initially join the pro-ana blog group?

2. What do you feel you gain from your pro-ana blog group participation?

The following questions refer to your reasons for being a member of a pro-ana blog group. On a scale from 1 (not at all like my reasons) to 5 (completely like my reasons) please indicate how much each one of the following statements sounds like one of your reasons for blogging as a member of a pro-ana blog group:

	Not At All	A little	Somewhat	Very Much	Completely
I participate as a 'pro-ana blogger' to...					
3. solicit new ideas or information about how to be a "better ana"	1	2	3	4	5
4. have people who will listen to how I feel and support me without judgment	1	2	3	4	5
5. open up about my eating-related attitudes and behaviors without feeling like I will be reprimanded because of my choices	1	2	3	4	5
6. be a part of a community where we all understand one another	1	2	3	4	5
7. receive feedback on how I keep my eating behaviors from interfering with my relationships with family and/or friends	1	2	3	4	5
8. discuss my lifestyle without having to justify my ana-related choices	1	2	3	4	5
9. connect with others similar to me	1	2	3	4	5
10. develop a sense of who I am	1	2	3	4	5
11. keep track of my personal habits	1	2	3	4	5
12. inform others about what is going on in my life	1	2	3	4	5
13. release tension through writing	1	2	3	4	5
14. encourage others	1	2	3	4	5
15. work out my issues through posting on my blog	1	2	3	4	5
16. help me strengthen my pro-ana characteristics/identity	1	2	3	4	5

	Not At All	A little	Somewhat	Very Much	Completely
17. support others who are going through a tough time	1	2	3	4	5
18. receive support when I am going through a tough time	1	2	3	4	5
19. provide information that will assist others	1	2	3	4	5
20. let others know I understand how they feel	1	2	3	4	5
21. document my life so I can reflect on it	1	2	3	4	5
22. provide helpful information to other blog members	1	2	3	4	5
23. give people new ideas about how to reach their goals	1	2	3	4	5
24. receive encouragement from people who understand what I am going through	1	2	3	4	5
25. avoid being labeled as ill or sick because of my ana-related lifestyle choices	1	2	3	4	5
26. reinforce my commitment to the pro-ana lifestyle	1	2	3	4	5
27. express my feelings through posting on my blog	1	2	3	4	5
28. belong to a community where I feel that I can be myself and still be accepted	1	2	3	4	5
29. get feedback from other members about what I could change about my diet/exercise so that I can reach my goals	1	2	3	4	5

Please answer the following questions about your blog participation

30. In the past month I have typically posted on my site _____
- 1) once or less this month
 - 2) once every other week
 - 3) once a week
 - 4) every other day
 - 5) once a day
 - 6) more than once a day
31. People comment to my new posts
- 1) never
 - 2) rarely
 - 3) sometimes
 - 4) often
 - 5) almost always
32. If you have posted and no one has left you any comments all week how would you feel?
- 1) Fine, I don't care if anyone comments
 - 2) Confused about why people didn't comment, but it wouldn't bother me much
 - 3) Confused and a little upset
 - 4) Pretty upset, I really look forward to people's comments
 - 5) Very upset, I would feel the other members didn't care about me anymore
33. In the past month I have typically logged on to read others blogs _____
- 1) once or less this month
 - 2) once every other week
 - 3) once a week
 - 4) every other day
 - 5) once a day
 - 6) more than once a day
34. In the past month I have typically commented on others sites _____
- 1) once or less this month
 - 2) once every other week
 - 3) once a week
 - 4) every other day
 - 5) once a day
 - 6) more than once a day
35. About how many hours total do you think you spend in a typical week reading other posts, posting, commenting, or reading comments in the pro-ana blog-community? _____
36. How many years _____ & months _____ have you been a member of a pro-ana blog group?

The next set of questions refers to your feelings about food and your body. Please indicate how often you feel the way described in the statements from 1 (you never feel that way) to 6 (you always feel that way)

	Never	Rarely	Sometimes	Usually	Often	Always
37. I eat sweets and carbohydrates without getting nervous	1	2	3	4	5	6
38. I think about dieting	1	2	3	4	5	6
39. I feel extremely guilty after overeating	1	2	3	4	5	6
40. I am terrified of gaining weight	1	2	3	4	5	6
41. I exaggerate or magnify the importance of weight	1	2	3	4	5	6
42. I am preoccupied with the desire to be thinner	1	2	3	4	5	6
43. If I gain a pound I worry that I will keep gaining	1	2	3	4	5	6

The following two questions inquire about the social support available in your life.

49. On a scale from 1 to 5 (1= very dissatisfied, 5= very satisfied) please rate how satisfied you are with the level of support (dependability, care and concern, acceptance, and other supportive behaviors) available to you from your face-to-face network (family, friends, non-internet relationships):

Very Dissatisfied	Somewhat Dissatisfied	Neutral	Somewhat Satisfied	Very Satisfied
1	2	3	4	5

50. On a scale from 1 to 5 (1= very dissatisfied, 5= very satisfied) please rate how satisfied you are with the level of support (dependability, care and concern, acceptance, and other supportive behaviors) available to you from your pro-ana blog group/pro-ana bloggers:

Very Dissatisfied	Somewhat Dissatisfied	Neutral	Somewhat Satisfied	Very Satisfied
1	2	3	4	5

Information about you is very important to this study. Please answer the following questions about yourself.

51. Age _____

52. Height _____

53. Weight _____

54. Sex: A. Male B. Female

55. Highest education level completed

- 1) Some High School
- 2) High school/GED
- 3) Some College
- 4) College
- 5) Some graduate school
- 6) Graduate school

56. Please indicate all that apply:

- 1) African American/Black
- 2) Asian/Pacific Islander
- 3) Hispanic/Latino (a)
- 4) Native American
- 5) White/Caucasian
- 6) Other (please specify) _____

According to the National Eating Disorders Association (2002), it is not uncommon for people to feel they have to look or feel a certain way to be happy. But behaviors initially used for a little weight loss can quickly spin out of control and become serious and life-threatening. Because of the severity (both emotionally and physically) of eating disorders, the National Eating Disorders Association (2002) says professional help is always recommended.

Below are resources where you can access information about eating disorders:

The National Eating Disorders Association

Website: www.edap.org

Toll-free Information and Referral Helpline: (800) 931-2237

The National Association of Anorexia Nervosa and Associated Disorders

Website: www.anad.org

Referrals to treatment specialists: (847) 831-3438

(9am-5pm Central Time) they offer hotline counseling, a national network of free support groups, referrals to health care professionals

[The Renfrew Center](#)

Referrals to Eating Disorder specialists (US and Canada) : (800) -736-3739

Thank you for your participation!

APPENDIX C

Pro-Ana Blogging Analysis Codebook Explanations

General Coding Instructions

I. Introduction

We are concerned with motives for joining and gratifications from blogging membership among pro-ana bloggers. You are coding responses to two survey questions for the presence or absence of 12 motives.

1. Why did you initially join the pro-ana blogging?
2. What do you feel you gain from your pro-ana blogging membership?

1. Maintain/Form a Community Forum

To belong to, or be a part of, a community of others like themselves.

Examples: “To meet other people who were going through the same things as me.”

“To make friends who are going through similar issues.” (*This would also be coded as motive #10, social/friendship*)

2. Document my life

To document or keep track of parts of their lives (e.g. attitudes, progress, behaviors)

Examples: “I wanted to find a place to post my progress.”

“So I could post about my habits and stuff.”

3. Catharsis

Expressing feelings and/or experiencing some sort of ‘emotional release’ when they write on their blog.

Examples: “I feel better because I have a place to write about my feelings.”

“To release tension about stuff that is going on in my life.”

4. Obtain Social/Emotional Support

To be supported, understood, cared about, empathized with.

Examples: “To talk to others who understand how I feel and what I am going through.”

“For support.”

5. Provide Social/Emotional Support

Helping other bloggers by offering support, empathy, care, and/or understanding.

Examples: “To reach out and help girls suffering from eating disorders.”

“To support others struggling with ‘ana.’

6. Obtain Information

To obtain information (e.g. tips, pictures, plans).

Examples: “To find diet tips and inspirational pictures.”

“To get ideas for exercises that burn a lot of calories.”

7. Provide Information

To provide information, tips, knowledge to other members.

Examples: “To help teach members how to raise their metabolism by eating veggies and whole grains, and other healthy foods.”

“To pass along exercises that work well for me.”

8. Ego-Protection

To avoid being judged or treated as someone that is ill because of their lifestyles.

Examples: “This is the only place I can safely post about stuff without being judged.”

“Other people treat me like I am ill or crazy if I talk about ‘ana stuff.’ On here they don’t do that.”

9. Identity

To explain who they are, the group they are part of, or the group they want to be a part of, in effort to help others understand their identity/strengthen their identity.

Examples: “Because I am trying to lose weight so that I can be a better ana.”

“Because I have an eating disorder.”

10. Social/Friendship

To make friends or socialize.

Examples: “To make friends who are going through similar issues.” *(This example would also be coded as motive #1-community)*

“To make friends.”

11. Motivation to reach goals

To obtain motivation or willpower (to help them reach their goals).

Examples: “Willpower and strength.”

“Lots of inspiration to continue losing weight.”

12. Social Comparison

To compare one’self with, or measure one’self against, others.

Examples: “To compare myself with others to know if I am a good ana.” *(This would also be coded as motive # 9, identity)*

“It motivates me to do better when I see someone doing way better than me.” *(This would also be coded as motive # 11, motivation)*

APPENDIX D

Blogring Analysis Reference Sheet for Coders

1. **Community:** To belong to, or be a part of, a community of others like themselves.
2. **Document life:** To document or keep track of parts of their lives.
3. **Catharsis:** Express feelings/ experience 'emotional release' when writing on blog.
4. **Obtain Social/Emotional Support:** To obtain support, understanding, empathy.
5. **Provide Social/Emotional Support:** To provide support, understanding, empathy.
6. **Obtain Information:** To obtain information (e.g. tips, pictures, plans).
7. **Provide Information:** To provide information (e.g. tips, knowledge, plans).
8. **Ego-protection:** To avoid being judged and/or treated like they are ill.
9. **Identity:** Explain: who they are/ group they belong to/group they want to belong to.
10. **Social/Friendship:** To make friends or socialize.
11. **Motivation to reach goals:** To obtain motivation/willpower (to reach goals).
12. **Social Comparison:** To compare one 'self with, or measure one 'self against, others.