

Pro-Anorexia on Social Media

DISSERTATION

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By

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## Abstract

This dissertation presents a qualitative study investigating the phenomenon of pro-ana, or pro-anorexia, on social media. Pro-Ana, or Pro-anorexia, is a recent trend just emerging from its first decade of research (Casilli, Tubaro, & Araya, 2012). Those who are a part of online pro-ana communities view anorexia as a lifestyle choice, not a serious mental disorder (Christodoulou, 2012). Based mainly online, pro-ana community members use the Internet to connect with each other, share tips and tricks to hide their disorder and celebrate one another's weight loss (See Christodoulou, 2012; Casilli et. al, 2011).

Previous research has focused on pro-ana websites as identified by searching Internet browsers (See Dias, 2003). The goal of the present study is to examine pro-ana on social media. The presence of pro-ana on social media (social networking sites) has received limited previous scholarship. In addition to having less research performed on these particular sites, these sites are largely accessed by young adults (Lenhart, Purcell, Smith & Zickuhr, 2010). Additionally, attempts to suppress this content have been made by each of the three websites in this study.

The over-arching purpose of this study was to (1) identify if the suppression attempt has been successful and (2) identify the attributes of pro-ana content on the three social media websites which prompt the content to become inactive on each website.

Additionally, major aspects of the content, such as the influence of media generated content, characteristics of the beauty ideal and the role of fashion were analyzed. Finally, themes present in the content were analyzed with thematic analysis.

In order to achieve the goals of this research, a qualitative content analysis was performed. The initial phase of data coding was based on the results of an exploratory study ending in March of 2013. The observed content was followed for seven months. Coding for characteristics of content was coded as present or absent. Thematic analysis was used to report qualitative themes such as prevalence and types of emotional distress, while testing for content prevalence and characteristic differences utilizing the Chi-square test of independence.

Results from this study indicate that the attempted suppression of pro-anorexia content have not been successful. Further, there do not appear to be consistent differences in terms of what characteristics of this content are different in terms of remaining active versus becoming inactive. Additionally, the beauty ideal portrayed was essentially uniform across all three websites during the observation phase. The main implication from this study is that suppression attempts have at this point been unsuccessful and will likely remain so until society's view of beauty becomes more inclusive.

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## Field of Study

Major Field: Human Ecology

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## **Chapter 1**

### **Introduction: The Importance of Physical Attractiveness**

“Almost from the moment of birth, each of us is judged- silently, unconsciously and nearly instantly- on the basis of everything that goes into the mix of qualities known as ‘physical attractiveness.’”

– George L. Patzer (2008, p. 3)

Body image has been garnering attention from researchers across a number of disciplines, particularly the topic of body dissatisfaction, which is so prevalent currently in women that it has been deemed ‘normative discontent’ by some researchers (See Rodin, Silberstein & Striegel-Moore, 1985). The role of the media in cultivating this dissatisfaction has been investigated in previous research, which has found that the internalization of Western beauty ideals, as depicted in the media, is related to higher degrees of body dissatisfaction (Jefferson & Stake, 2009). The media serves to socialize women regarding the importance of their physical attractiveness and reinforce these messages given by family, peers and partners (Tiggemann, 2012).

According to the halo effect, what is beautiful is good, meaning that a cognitive bias for a pleasing physical appearance translates to a positive overall impression of a person. Standing (2004) writes that this physical attractiveness stereotype is the habitual tendency for people to ascribe more favorable personality traits to those who are attractive. Favorable perception naturally leads to an attraction towards attractive individuals over less attractive individuals. According to Rudd & Lennon (1999), there are three primary reasons why physically attractive people may be considered more interpersonally attractive. First, attractive people are aesthetically appealing and people, in general, prefer beautiful surroundings. Second, people infer more positive qualities about attractive people due to their appearance. Finally, our own self-esteem increases when associating with beautiful people, as they are perceived to raise our own social capital.

This preference for physically attractive individuals, also known as the beauty bias, puts unattractive individuals at a disadvantage in familial interactions, peer interactions, schooling, careers and romantic partner selection (e.g. Etcoff, 1999, Hatfield & Sprecher, 1986; Patzer, 2008; Rhode, 2010). Recently, some evidence has found that people do not necessarily perceive beauty as “good,” but that they perceive unattractiveness as “bad” (Griffin & Langolis, 2006). This research found that for female children and adults, the unattractive were largely at a social perceptual disadvantage, rather than attractive individuals being at an advantage (Griffin & Langolis, 2006). These results reveal the “lookism” stigma which surrounds unattractive individuals. This stigma

can translate to discriminatory actions against “unattractive” individuals, which may detrimentally impact their self-esteem (Patzner, 2008).

### **The Malleability of Physical Attractiveness: Thin is In**

Across 37 countries, it has been found that men place more importance on physical attractiveness in mates than do women (Buss et. al., 1990). Physical attractiveness can encompass a variety of attributes; however, researchers typically focus on facial or body attractiveness. These attractiveness characteristics are somewhat variable between cultures and subcultures. Both facial and body attractiveness traits are socially constructed to a certain degree.

More symmetrical facial features have been found to be perceived as more attractive (Thornhill & Gangestad, 1999). Additionally, people possessing facial features that are closer to the population average are perceived to be more attractive (Thornhill & Gangestad, 1999). Men across cultures have been shown to prefer a combination of large eyes, small noses and full lips in female partners (Jones et. al., 1995). These traits are typically associated with more youthful females.

However, body ideals are more variable (Cunningham, Roberts, Barbee, Druen & Wu, 1995). Following the “slender-ization” of media ideals since the 1950’s, Lamb, Jackson, Cassidy & Priest (1993) found that men have begun to progressively favor slimmer women. Specifically, men were most influenced by the prevalent aesthetic of the time when they were younger, with older men preferring heavier women than college age men (Lamb et. al., 1993). In addition to age, culture and ethnic identification can

influence the body characteristics that are considered ideal for women. Within American culture, Caucasian and African-American men have reported different body ideals for women, with Caucasian men preferring thinner women and African-American men preferring larger women (Cunningham et. al., 1995).

Thornhill & Gangestad (1999) investigated the relationship between facial and body physical attractiveness. In this study, 60 men, 30 from Vienna and 30 from New Mexico between the ages of 19 and 55, rated nude photos of Caucasian women between the ages of 18 and 30 for attractiveness (Thornhill & Gangestad 1999). Overall facial attractiveness was positively related to body attractiveness; however, no specific body trait was found to be significantly associated with facial attractiveness (Thornhill & Gangestad, 1999). Currie & Little (2009) investigated the importance of face and body attractiveness on the preference for long and short-term partners. When shown the face and the body of a female model, male participants reported that facial attractiveness had a stronger influence on their overall ratings of physical attractiveness, as well as their preference for long and short-term mates (Currie & Little, 2009). However, the body had a stronger influence on preference for short-term mates in comparison to long-term mates (Currie & Little, 2009).

The sociocultural environment can account for variability in physical traits which are considered to be attractive, particularly in terms of body size (Sarwer, Grossbart & Didie, 2003). Evolutionary psychologists have argued that waist-to-hip ratio is the main predictor of female attractiveness instead of weight (body mass index) (See Singh, 1993). However, research finding waist-to-hip-ratio as the main predictor of attractiveness has

failed to be verified when participants are shown photographs instead of line drawings. In these cases, body mass index (BMI) has been found to be the most predicative of body attractiveness (See Table 1). These results indicate the influence of the extremely thin sociocultural ideals which women try to measure up to, regardless of body shape.

The thin ideal of today has hardly been constant when looking historically at Western body ideals. The ideal female frame has changed practically by decade during the past century (Grogan, 2008). During the 1920s, the ideal body for women became flattened in the bust and practically curve-less (Mazur, 1986). In the 1960s and the era of the supermodel Twiggy, the slenderization of the American female frame began. Women's hip and bust sizes began to decline and the height of the ideal female frame increased (Mazur, 1986). By the 1970s, curves began to reappear but prominent bodies remained slender (Sarwer et. al., 2003). In the 1980s, fitness was highly emphasized and this led to musculature being emphasized for women (Sarwer et. al., 2003). During the 1990s, supermodels like Tyra Banks embodied the ideal lean, toned and curvaceous body, while the world of high fashion saw the introduction of the "heroin chic" look exemplified by supermodels like Kate Moss and her gaunt, seemingly heroin-using appearance (Sarwer et. al., 2003).

The ideal prominently promoted currently in affluent Western countries is that of a woman who is not only thin, but tall, toned and with large breasts (Alipoor, Goodarzi, Nezhad & Zaheri, 2009). These ideal body transitions reveal the underlying belief that women's bodies are malleable and subject to the desires of the media and the fashion



industry. Additionally, in Western societies, slenderness is perceived to be associated with happiness, success, youthfulness and social acceptability (Alipoor et. al., 2009).

### **The Pervasiveness of Lookism**

Preference for attractive individuals begins in infancy. Not only do parents, particularly mothers, give preference to attractive infants in the forms of affection and attention, but the infants themselves prefer looking at attractive faces and spend more time looking at them (Langlois, Ritter, Casey & Sawin, 1995; Langlois et. al., 1987; Langlois, Ritter, Roggman & Vaughn, 1991). Mothers of attractive infants also report less stress and infant interference with their lives than mothers of unattractive infants (Langlois et. al., 1995). In contrast to the view that children are socialized to prefer attractive individuals, infant preference for attractive faces has been found to occur less than a week after birth (Slater et. al, 1998).

Teachers also show preference for more attractive students. According to the “Pygmalion hypothesis,” if teachers expect greater intellectual gains from specific students, those students evidence more progress in school than students without these expectations (Rosenthal & Jacobson, 1968). In elementary school, attractive students are perceived to have higher IQs, educational potential and social potential (Clifford & Walster, 1973, Langlois et. al, 2000). This perceptual bias can lead to attractive students receiving higher marks and being punished more leniently for misbehavior than their less attractive peers (Hatfield & Sprecher, 1986). Attractiveness is associated with higher academic performance and this elevated performance positively predicts how likely it is

that a student will complete high school and secondary school (Judge, Hurst & Simon, 2009).

Before entering school, children are exposed to attractive heroes and heroines in their favorite fairytale stories who embody positive attributes, like sociability, happiness, kindness or success (Herbozo, Tantleff-Dunn, Gokee-Larose & Thompson, 2004). These beauty-biased portrayals contribute to children's expectations of positive behavior from their attractive peers (Langlois & Styczynski, 1979). Due to this expectation, attractive children are more likely to be sought after for interaction and, therefore, are more popular with their same sex peers (Adams & Roonpnarine, 1994).

As people begin their careers, the beauty bias becomes measurable in terms of success in the job search and the income associated with this job. As Berry (2008) describes, it is easier to get and hold onto a job if you are tall, thin, young, attractive and white. There exists a "plainness penalty" for those considered to be below average in attractiveness or unattractive. Women considered attractive or beautiful earn four percent more than average looking women, while below average or homely women earn five percent less (Hamermesh & Biddle, 1994). A similar effect is present for men, with men who were rated as above average looking or handsome making five percent more, while men rated as below average looking or homely making nine percent less (Hamermesh & Biddle, 1994). This income increase occurs even after accounting for intelligence; however, attractiveness does not have a stronger effect on earnings than intelligence (Judge et. al., 2009). Additionally, Fletcher (2009) found that, for individuals who are above average or very attractive, increases in ability are associated with increases in

wages. However, those below average in attractiveness may see negative economic returns to their ability (Fletcher, 2009). Finally, Hamermesh, Meng & Zhang (2002) found that women's expenditures on clothing and cosmetics was positively associated with perceived beauty which translated into higher earnings for those who spent more on these products. The existence of economic punishments for women perceived as unattractive or not invested in their appearance likely makes women particularly prone to processing information related to physical appearance.

The presence of the beauty bias is perhaps most felt in the realm of interpersonal interaction. Initial attraction in romantic relationships is often spurred by physical appearance. This leads to attractive men and women dating more, having more sexual interludes and receiving more romantic attention than their less attractive counterparts (Etcoff, 1999). Even our "blind" justice system becomes "sighted" by the introduction of attractiveness. Attractive defendants are more likely to receive lenient punishments for their crimes when compared to their less attractive counterparts (Patzner, 2008). If one has political aspirations, being attractive may help to defeat opponents. Attractive political candidates have an electability edge over unattractive candidates, particularly when issue agreement is high (Schubert, Curran, & Strungaru, 2011). Voters may go so far as to distort the views of attractive politicians to make them more agreeable with the voter's own views (Schubert et. al., 2011).

## **Appearance Pressure for Women**

Women are socialized to attend to, enhance, and are judged more readily for their appearance than men are (Henderson-King & Brooks, 2009). One reason for the heavier emphasis on female appearance is the fact that men place more importance on physical attractiveness in a mate than women do (Buss et. al., 1990). Women are more likely than men to wear makeup, go on diets, get new hairstyles, spend more than an hour a day on their appearance and seek plastic surgery (Buss, 1994; Henderson-King & Brooks, 2009). Men are more concerned with their status than appearance, and therefore, a beautiful woman as a partner in a heterosexual relationship can be seen as reflecting the man's status, i.e. "trophy wife" (Buss, 1994). Women are also highly competitive with each other in terms of attracting potential mates and often engage in courting sabotage of their rivals by calling attention to their flaws and thus lowering the social perception of the rivals' beauty (Buss, 1994). A possible economic reason for this behavior is women have more limited access to status, power and resources (Li & Kenrick, 2006). In order to gain maximum upward mobility, it is in a woman's best interest to attract the most successful mate that she can (Li & Kenrick, 2006). One potential method for attracting the most competitive mate would be for a woman to make herself seem more physically attractive.

Attractiveness impacts how one is treated by family, friends, teachers, partners, co-workers, bosses, and the state. Contrary to the popular adage that 'what matters is on the inside,' there are real consequences for being considered unattractive, especially for women. In addition to the potential biases that could be encountered based on one's attractiveness, an unhealthy preoccupation with one's physical appearance can result in a

distorted body image. Body image dissatisfaction has been found to have a significant influence on psychological functioning in several areas, including lowering self-esteem amount of personal happiness (e.g. Furnham, Badmin & Sneade, 2002; Tiggemann, 1992; Clay, Vignoles & Dittmar 2005; Stokes & Frederick-Recascino, 2003; McCarthy, 1990).

It is clear that beautiful people get social advantages in our society and, naturally, these advantages are something most people want to attain. The western culture, specifically America, has produced a clear beauty standard for women. She is thin, beautiful, young and submissive (Wolf, 1991; Kilbourne, Jhally & Rabiinovitz, 2010; Goffman, 1979). Evidence has shown that mass media is a powerful communicator of social norms (Lazarsfeld & Merton, 2000), including gender roles (Signorelli, 1990) and appearance standards (Wolf, 1991). Western culture's use of the mass media to disseminate the beauty standard allows this narrow definition of ideal beauty to dominate society's beauty expectations. Further, the mass media's portrayal of this beauty standard emphasizes that attaining this standard is (1) possible, and (2) should be a goal for women (Kilbourne et. al., 2010). The internalization of the societal expectation of the attractive, thin body as a standard for one's own body often leads to body dissatisfaction, which is one of the most consistent factors for the development of an eating disorder (Thompson & Stice, 2001; Tiggemann, 2012).

Some researchers have proposed that the preference for thinner women is rooted in the evolutionary preference for women with an hourglass silhouette or a low waist-to-hip ratio instead of low overall body weight. The following table outlines selected research performed on the perceived attractiveness of females with low waist-to-hip

ratios and low body weights. As can be seen from this research, women with lower body weights are perceived to be more physically attractive, regardless of waist-to-hip ratio (See Henss, 1995; Furnham, Tan & McManus, 1997; Tovée, Reinhardt, Emery & Cornelissen, 1998 & Tovée, Hancock, Mahmoodi, Singleton & Cornelissen, 2002). This research indicates that the primary indicator for female body attractiveness is thinness.

Author(s)	Purpose	Methodology	Sample	Findings
Singh (1993)	To investigate the impact of waist-to-hip ratio on attractiveness.	1) Analyzed waist-to-hip ratios of Miss America winners and Playboy centerfolds. 2) Showed participants line drawings of normal, under and overweight body shapes.	1) Data on Miss America winners from 1923 to 1987 & Playboy centerfold data from 1955-1965 & 1976-1990. 2) Undergraduate students between 18 and 22.	1) A narrow waistline has been the most stable female body ideal. 2) Normal weight figures were found to be most attractive by 65% and underweight by 35%. Women preferred slimmer figures than men for female bodies; Female figures with low waist-to-hip ratio were found to be most attractive.
Henss (1995)	To investigate the impact of waist-to-hip	Subjects were shown line drawings of	72 males and 72 females ranging in age	Underweight male and female figures

Continued

Table 1. Female Attractiveness: Waist-to-Hip Ratio Versus Body Weight

Table 1. Continued

Henss (1995)	ratio on attractiveness and personality perception.	varying waist - to- hip ratio and BMI. The subject rated the drawings on a 9-point semantic differential scale for attractiveness and personality.	from 19 to 32.	were rated the most attractive. Female figures with the second smallest waist-to-hip ratio were judged as most attractive. Drawings of emaciated female forms were not found attractive.
Furnham, Tan & McManus (1997)	To provide a cross-cultural test of the effect of waist-to-hip ratio on attractiveness.	Participants were presented with 24 line drawings of male and female bodies with 4 waist-to-hip ratio levels and 3 weight levels (under, normal and over weight). Figures were rated on a 7-point semantic differential scale for attractiveness, youthfulness, sexiness, healthiness & capability for reproduction.	60 females and 30 males ranging in age from 18 to 47 years old.	Normal weight females were judged to be most attractive and overweight the least. Female figures with the lowest waist-to-hip ratio were judged as the most attractive in each of the normal and underweight categories.
Tovée, Reinhardt, Emery & Cornelissen (1998)	To investigate whether BMI or waist-to-hip ratio better	Participants were shown photographs of females in 4	40 male undergraduate students.	Body mass index accounted for 73.5% of the

Continued

Table 1. Continued

Tovée, Reinhardt, Emery & Cornelissen (1998)	predicted male perception of female attractiveness.	waist-to-hip ratio categories and 3 weight levels (under, normal and over weight) and asked to rate attractiveness.		variance in attractiveness while waist-to-hip ratio accounted for 1.8% of the variance.
Puhl & Boland (2001)	To investigate BMI and waist-to-hip ratio effects on perceptions of attractiveness and reproductive capability.	Participants were shown manipulated photos of two female models. One had a waist-to-hip ratio of .72 and the other .86. Their weights were manipulated to show under, normal and overweight.	120 female and 120 male undergraduate psychology students ranging in age from 17 to 23.	Underweight models were rated as significantly more attractive than the normal and overweight models. Additionally, the model with the larger waist-to-hip ratio was rated as more attractive.
Tovée, Hancock, Mahmoodi, Singleton & Cornelissen (2002)	To investigate whether BMI or waist-to-hip ratio has a stronger effect on perceptions of female attractiveness.	Participants were shown 60 pictures of the front view of real women's bodies and asked to rate the attractiveness of each body.	23 male and 23 female undergraduate students.	BMI revealed a stronger relationship to ratings of attractiveness than did waist-to-hip ratio. Further, those with lower waist-to-hip ratios and higher BMIs were judged as least attractive.
Swami & Tovée (2005)	To investigate differences in perceptions of	Participants were shown 50 images of	British and Malaysian participants	Male and female rankings were highly

Continued



Table 1. Continued

Swami & Tovée (2005)	female attractiveness between cultures with observers of these cultures from rural and industrial areas.	women who varied in BMI from emaciated, underweight, normal weight, overweight and obese. Waist-to-hip ratios varied from .68 to .98.	from industrialized, semi-industrialized and rural groups. Convenience sample of 50 male and 50 female British undergraduate students. 50 female and 50 male Malaysian undergraduate students living in Britain. 100 participants from Kuala Lumpur, Malaysia (even split between male/female and three main ethnic groups). 50 male and 50 females from Kota Kinabalu Malaysia. 39 female and 42 males from Kota Kinabalu rural Malaysia.	correlated. BMI was found to account for between 76.9% and 84.1% of the variance in attractiveness ratings. Waist-to-hip ratio account for between 1.6% and 8.9% of the variance.
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### Purpose of this Study

Internalization of the thin ideal body can be detrimental to women's well being, spurring them to feel dissatisfied with their bodies and, in extreme cases, develop an

eating disorder. The purpose of this study was to observe an online community who has internalized the thin ideal and the inspirational images which this community will look to. Arguably the community most influenced by the thin ideal is the pro-anorexia community. In this community, anorexia is commonly promoted as a lifestyle decision rather than a mental illness. As will be demonstrated, the members of this community often share a primary goal of obtaining a thin body. Most studies examining this community have investigated personal websites and blogs (See Dias 2003; Norris, Boydell, Pinhas & Katzman, 2006; Borzekowski, 2010).

However, this community has been establishing a problematic presence on social media websites prompting the social media websites Facebook, Pinterest, and Tumblr to attempt to suppress the posting of such content. Therefore, the specific purpose of this qualitative, exploratory study was to investigate: (1) How effective has the suppression attempt been in suppressing pro-anorexia posts?, (2) What characteristics of pro-anorexia content will prompt the content to become inactive on the studied websites and will the websites differ in their removal criteria?, (3) How will the pro-ana communities on differ from each other and how will these sites differ from pro-anorexia websites generally?, (4) How will the ideal body be portrayed on these websites through thinspiration sections and will this ideal be disseminated using media figures or group members?, and (5) What role will fashion play on these sites and what type of clothing styles will be prominent on these sites?

## **Significance of this Study**

The significance of this research lies in its in-depth analysis of the current state of the pro-anorexia community on social media. Williams & Riley (2013) discussed the need to for further research to track the trends of this online group. This research adds to the body of knowledge about the pro-anorexia community on social media, which currently is an understudied topic.

Further, this research investigates the influence of the sociocultural beauty ideal in this community and the lengths to which community members will go to approximate this ideal, in addition to coping mechanisms utilized when they engage in behaviors that will not support their primary goal. Fashion will be analyzed for the sociocultural influence that it exerts on the community, an aspect that has yet to be adequately addressed.

Finally, this research evaluates the efficacy of suppression attempts on this community's activities made by the above-mentioned websites. This research will reveal the extent of the content found posted on these websites by pro-anorexia community members, as well as differences in the types of content which would make a page more likely to become inactive over the course of the observation.

## **Definitions of Terms**

Thinspiration, or Thin-inspiration: No official definition, however the Families Empowered & Supporting Treatment of Eating Disorders (2014) offers the following definition:

“Any form of media, print, online, pictures, videos, etc. that are utilized in an unhealthy manner to promote continued weight loss. This information can take the form of images of slim celebrities, individuals afflicted with an eating disorder or emaciated models and is often exchanged amongst members of online pro-eating disorder communities (pro-ana, pro-mia). Reverse thinspiration can include posting pictures of oneself at a high weight in mirrors or in the kitchen in attempts to induce guilt and prevent eating or pictures of morbidly obese individuals to facilitate disgust and motivate weight loss. Thinspiration can also include poems, music lyrics, quotes, sayings, etc. that encourage weight loss, promote the eating disorder and endorse it as being a life style and choice rather than an illness.”

## **Chapter 2**

### **Literature Review: Eating Disorders, Anorexia Nervosa, & Pro-Anorexia**

“We turn skeletons into goddesses and look to them as if they might  
teach us how not to need.”

— Marya Hornbacher (1998, p. 119)

#### **The Socio-Cultural Environment**

The three main disseminators of appearance pressure are friends, family and the media (Tiggemann, 2012). Paxton, Schutz, Wertheim & Muir (1999) found that adolescent female friendship cliques showed higher similarity in body image concerns, dietary constraints and extreme weight-loss behaviors. Additionally, the practice of extreme weight loss behaviors by one’s friends predicted personal practice of these behaviors (Paxton et. al., 1999). Peer victimization may also lead to unhealthy dieting and non-suicidal self-harm (Hilt & Hamm, 2014). Parents, particularly those raising their daughters in appearance focused family cultures, can influence their daughters’ body

image dissatisfaction and subsequent disordered eating (Kluck, 2008). When combining family appearance focus and daughter body dissatisfaction, increased disordered eating has been previously observed (Kluck, 2010).

The media often plays a sizeable yet silent role in cultivating appearance dissatisfaction. Two recent meta-analyses investigating the effects of exposing women to images portraying the thin ideal found that the majority of studies revealed a significant decrease in body satisfaction after exposure to such images (Groesz, Levine & Murnen, 2002; Grabe, Ward & Hyde, 2008). By visual analysis, most fashion models meet the BMI criteria for anorexia (Radar Programs, 2012). This is a stark contrast to the average American woman who weighs 162.9 pounds and wears a size 14 (Vesilind, 2009), as the average fashion model wears a size 0 or a size 2 (The Model Alliance, 2011).

Actresses, like models, are under inordinate pressure to maintain a thin figure. To introduce the 2013 Golden Globe awards, comedian and actress Tina Fey cheekfully said “The Hunger Games was one of the biggest films of the year and also what I call the six weeks it took me to get into this dress.” Her co-announcer Amy Poehler added “Ang Lee has been nominated for best director for the ‘Life of Pi’ which is what I’m gonna call the six weeks after I take this dress off.” The two shared a high five gesture and received laughter and cheers from the crowd which was filled with the Hollywood elite. The light-hearted nature of the exchange exemplified that not only do actresses feel the pressure to be slim, but that engaging in disordered eating to obtain this thinness is commonly accepted in the Hollywood community.

## **Anorexia Nervosa: An Introduction**

In our thin idealizing culture in which the media often objectifies women's bodies, body dissatisfaction is becoming increasingly prevalent and has been evidenced in girls as young as three (Etcoff, Orbach, Scott & D'Agostino, 2004; Grabe et. al., 2008; Hayes & Tantleff-Dunn, 2010). Sixty percent of American women have reported that they felt their body weight was too high (Etcoff et. al., 2004). Body dissatisfaction arising from the perceived difference between oneself and the cultural thin ideal may contribute to a preoccupation with food and weight, which can develop into an eating disorder (National Eating Disorders Association, 2013).

The prevalence of body dissatisfaction is mirrored in the rates of linear increases of anorexia observed among females aged 15-24, which has been observed between the years of 1935 to 1989 (Lucas, Crowson, O'Fallon & Melton, 1999). When looking at the rates of anorexia nervosa incidence by decade, it is interesting to note that the lowest observed incidence occurred in the 1950s, with the second highest point occurring in the 1960s and the highest point in the 1980s (Lucas et. al., 1999). This pattern closely mirrors the prevalent cultural ideals of these time periods, with the cultural ideals shifting from curvy body forms to slender and then to slim and toned (Mazur, 1986). Additionally, it is important to note that these feminine body ideals may be internalized by men as guidelines for seeking an attractive mate. Previous research has found that men growing up in the 1940s and 1950s found larger-sized women attractive when compared to those who grew up in the 1970s (Lamb et. al., 1993). Particularly problematic in the increase of

anorexia is the fact that anorexia has the highest mortality rate of all psychiatric disorders, including other forms of eating disorders (Striegel-Moore & Bulik, 2007; Arcelus, Mitchell, Wales, & Nielsen, 2011).

Anorexia nervosa is, first and foremost, a mental illness with severe consequences for its sufferers. (American Psychiatric Association, 2000). The illness is characterized by the unwillingness to maintain a minimum weight, a current body weight that is 85% of what it is supposed to be, fear of becoming fat or gaining weight, disturbance in body weight and shape perceptions, body image linked to self-esteem (American Psychiatric Association, 2014). There are two main types of anorexia nervosa; restrictive eating with compensatory binge eating/purging and restricting (Delinsky & St. Germain, 2012). In the binge eating/purging type, sufferers commonly engage in food consumption compensatory behaviors such as self-induced vomiting or the misuse of laxatives, while the sufferers in the restricting type do not engage in such compensatory behaviors (Delinsky & St. Germain, 2012).

According to the National Eating Disorders Association (2013), some warning signs of the development of an eating disorder include preoccupation with weight, food, fat grams and dieting, refusal to eat certain foods, denial of hunger, consistent excuses to avoid mealtimes and food situations and withdrawal from usual friends and activities. Medical complications arising from the disorder can include cardiovascular problems, loss of muscle tone, bone density and hair, in addition to a cold feeling in the body, fainting and fatigue (Lemberg & Cohn, 1998; Katzman, 2005; National Eating Disorders Association, 2013). Co-morbidity with other disorders, such as obsessive compulsive



disorder (OCD) and body dysmorphic disorder (BDD) is common (Phillips, 2009; Neriroglu & Sandler, 2012). In addition to OCD and BDD, anorexia sufferers often co-morbidly suffer from depression and less frequently, anxiety disorders (Casper, 1998). In terms of fatalities from the illness, one of the common ways anorexia becomes fatal, apart from disorder complications, is suicide (Kaye, 2013).

### **The Etiology of Anorexia Nervosa**

The etiology of anorexia nervosa encompasses many aspects including biological, sociological, media effects, individual factors and family influences. Anorexia is suspected to be highly inheritable, with an estimated heritability range between 33% and 84% and heritability estimates ranging from 48% to 61% (Wade, Bulik, Neale & Kendler, 2000; Kortegeard, Hoerder, Joergensen, Gillberg & Kyvik, 2001). In terms of the biological root of the disorder, differences in genes involved in the regulation of eating behavior, motivation, reward mechanisms, personality traits and emotion have been found (Rask-Andersen, Olszewski, Levine & Schiöth, 2010). In addition, Young (2010) asserted that abnormalities in estrogen receptors present at the time of puberty could produce an abnormal response to estrogen, resulting in the development of anorexia and the gender differential in sufferers. Sociocultural factors, such as the thin ideal in western countries and the emphasis on thinness, have been found to contribute to an elevated risk for developing anorexia (Tiggemann, 2012). Finally, mass media messages serve as not only extremely important sources of information about the beauty ideal but also as a reinforcer of the ideal's importance and how one goes about

approximating it (Lopez-Guimera, Levine, Sanchez-Carracedo & Fauquet, 2010). The internalization of the media's ideal has shown a relationship to dieting concerns and disordered eating attitudes, in addition to predisposing females to experience greater body dissatisfaction after exposure to such media (Lopez-Guimera et. al., 2010). Pro-anorexia websites pose a unique, potential threat since those with greater body dissatisfaction or disordered eating attitudes are more likely to seek out media sources for guidance, inspiration and self-evaluation.

The effects of thin idealizing media in developing disordered eating are greater for women under 19 (Lopez-Guimera et. al., 2010). Additionally, those with less consistent self-concepts show higher internalization of the thin ideal and such internalization can lead to greater body dissatisfaction and the development of disordered eating (Vartanian, 2009). This suggests that those with a less fully formed understanding of who they are may base more of their self-worth on their appearance (Vartanian, 2009). During the time of adolescence, when there is heightened scrutiny on the body, anorexia typically develops. A majority of teenage girls are affected by such internal and/or external scrutiny and it has been found that over half of them skip meals, fast, smoke cigarettes, vomit and/or take laxatives to control their weight (National Association of Anorexia Nervosa and Associated Disorders, 2014).

Evidence of the socioculturally constructed pressure on female thinness can be seen in recent functional magnetic resonance imaging (fMRI) evidence showing that women, but not men, have activation in the prefrontal cortex when presented with the image of an overweight woman (Owens, Allen & Spangler, 2010). Additional evidence

has shown that less than optimal executive functioning of the prefrontal cortex is related to the progression of obesity, as this has been proposed to be related to poorer cognitive control of food intake (Kishinevsky et. al., 2012). As the prefrontal cortex is believed to be related to cognitive regulation and control, these results suggest that the presence of an overweight person can promote thoughts of weight control in women and that the functioning of the prefrontal cortex plays a noticeable role in the ability to control weight. One fMRI study of eating disorder patients found that these patients had an abnormal prefrontal cortex reaction in comparison to their non-eating disorder control peers when exposed to food stimuli (Uher et. al., 2004).

### **Characteristics of Anorexia Nervosa Sufferers**

Women are far more likely to develop anorexia when compared to men, and comprise an estimated 90% of those who develop an eating disorder (American Psychiatric Association, 2000). Additionally, anorexia usually presents between the ages of 14 – 19 (Zandian, Ioakimidis, Bergh, & Podersten, 2007). In terms of race, Caucasian women have shown higher rates of anorexia nervosa when compared to African American women, but not when compared to Hispanic or Native American women (Crago, Shisslak & Estes, 1996). Recently, AN has been developing in girls at younger ages and crossing traditionally accepted socio-economic class and racial boundaries which typically constructed the at-risk demographic for AN (Hesse-Biber, Leavy, Quinn, & Zoino, 2006).

During childhood, exhibiting fearful or anxious behavior has been found to be associated with calorie restriction and the attainment of low body mass index during the course of anorexia (Dellava et. al., 2010). Having a low body mass index is particularly problematic as women who have a BMI under 19 have been found to have a higher mortality risk even after controlling for other behavioral practices and medical conditions (Wyshak, 2007). Additionally, people with an underweight BMI have reported impaired quality of life in comparison to those with a normal BMI, particularly in the area of physical functioning (Ford, Moriarty, Zack, Mokdad, Chapman, 2001). Finally, an underweight BMI has been found to be associated with overtime work, currently being a student, having limited emotional support, as well as poor self-reported global and psychological health (Ali & Lindström, 2006).

Anorexics are typically achievement-oriented, perfectionistic, people pleasers (Thurstin, 1999). In addition, anorexia sufferers have demonstrated a higher level of maladaptive and achievement-oriented perfectionism when compared to non-eating disorder control groups (Bardone-Cone et. al., 2007). Additionally, anorexics with higher levels of perfectionism are more likely to drop out of treatment and have less recovery success 5-10 years after in-patient treatment (Bizeul, Sadowsky, & Rigaud, 2001; Sutandar-Pinnock, Blake Woodside, Carter, Olmsted & Kaplan, 2003). Behaviorally, those suffering from anorexia report higher levels of submissive behavior such as avoiding eye contact with others (Troop, Allan, Treasure, & Katzman, 2003).

## **Body Image Disturbance and Anorexia Nervosa Behaviors**

Delinsky & St. Germain (2012) reviewed the manifestations of body image disturbance in anorexia nervosa, which include perceptual, cognitive, affective and behavioral dimensions. Anorexics tend to perceive themselves as fat and to overestimate their body size. Anorexics who overestimate their body size also demonstrate poorer treatment outcomes by way of less weight gain, greater denial, and less progress. Cognitively, anorexia sufferers internalize appearance standards and are more likely to base their self-worth on achieving and maintaining a very low body weight, which can become a defining success in a person's life. The denial of the seriousness of low weight and the impact of maintaining such a low weight on quality of life, in addition to believing that medical professionals and loved ones are over-reacting with their concern over their low weights can contribute to the progression of the disease. Affectively, Western culture anorexia sufferers display feelings of fat phobia, feeling fat, ashamed, disgusted and self-conscious. 'Non-fat phobic' anorexia sufferers report refusal to eat food which is not related to body image. Their dietary concerns include somatic, or digestive, complaints related to eating certain foods, religious beliefs, desire for control and the desire to influence family dynamics. Typical behaviors of anorexia nervosa sufferers include body checking, avoidance of mirrors, and form fitting clothes, in addition to wearing clothes that are too big and covering parts of the body (Delinsky & St. Germain, 2012).

Some eating behaviors associated with anorexia include fasting, dieting, binge eating, self-induced vomiting, and the abuse of laxatives, diet pills or diuretics (Alton,

2005). Additional behaviors engaged in by anorexia sufferers in an attempt to suppress their weight include excessive exercise and smoking (Alton, 2005; Anzengruber et. al., 2006). Specifically, those with binge/purge type of anorexia are more likely to smoke than non-eating disorder individuals or those with restricting type anorexia (Anzengruber et. al., 2006). Additionally, eating disorder sufferers are more likely to report beginning smoking after the onset of their eating disorder (Anzengruber et. al., 2006). As anorexia can occur co-morbidly with depression, self-harm in the form of self-inflicted cutting, bruising and burning can also occur (Nagata, Kawarada, Kiriike & Iketani, 2000).

Anorexia is often a long-term, if not lifetime, battle for those afflicted. Even after improvement or recovery, a patient could still be prone to experiencing psychiatric symptoms such as depression or anxiety (Pike, 1998). Anorexia patients are often ambivalent to seeking treatment and even after it has been sought, patients often express some degree of negativity towards the treatments they receive (Button & Warren, 2001). When anorexia patients were asked to respond to a typical definition of anorexia in which the disorder is classified as an illness, one responded “I think illness to me is something you catch and has very negative connotations... I don't know that illness is the right term” (Button & Warren, 2001).

### **Anorexia Nervosa Treatment**

Treatment ambivalence is important to counter, as early treatment is associated with greater positive outcomes for anorexia sufferers (Zipfel, Löwe, Reas, Deter & Herzog, 2000). Such ambivalence also makes pro-anorexia websites particularly

dangerous since this ambivalence can be reinforced by other community members who are also reticent to seek treatment.

The best treatment approach to anorexia nervosa remains the subject of debate (Kaplan, 2002). Some common approaches to treatment incorporate medical intervention, individual psychotherapy and family focused psychotherapy into a program of in and out-patient treatments. Medical interventions typically include patient hospitalization to spur weight gain and the recovery of normal bodily functions, in addition to drug therapies. Several different treatments fall into the psychotherapy approach including active psychotherapy, cognitive-behavioral therapy, education and nutritional intervention (Kaplan, 2002). A more recent addition to the possible treatments for anorexia includes dialectic behavioral therapy (DBT) (Salbach-Andrae, Bohnkamp, Pfeiffer, Lehmkuhl & Miller, 2008). Little difference had been previously found in the effectiveness of these psychotherapy treatments in aiding disorder recovery, a result which has been compounded by small samples sizes in such studies (Kaplan, 2002). Family therapy approaches have been found to be an effective treatment method in terms of body weight gain for anorexia nervosa patients in adolescence but less so in adulthood (Kaplan, 2002). Group therapy is not typically recommended for anorexia nervosa sufferers, since patients tend to compete with one another over who can be the thinnest in a group setting (Kaplan, 2002). DBT focuses on aiding patients with emotional regulation as patients with eating disorders typically have difficulty in this domain (Salbach-Andrae et. al., 2009). The DBT approach has shown success in aiding BMI increase and the decrease of self-induced vomiting for anorexia patients (Salbach-Andrae et. al., 2009). In the

developing of treatment programs for the future, Kaplan (2002) recommends that the disorder be reformulated to specifically identify ambivalence and resistance as the primary symptom of anorexia nervosa, a symptom which treatment has to address before any focus is made on behavioral change.

Full recovery from anorexia can be difficult to achieve, as Steinhausen (2002) found in his analysis of anorexia nervosa outcome studies published between 1953 and 1999. Steinhausen (2002) found that only 46% of patients in the analyzed studies fully recovered from the disorder. Zipfel et. al. (2000) found in a 21-year longitudinal study, that a long duration of the illness before the first hospitalization was an important predictor of a continued diagnosis upon re-evaluation. Additional predictors of this poor outcome included a low body mass index (BMI), insufficient weight gain during the first hospitalization, presence of severe psychological and social problems and having the bingeing/purging type of anorexia (Zipfel et. al., 2000). Treating issues with food is also essential to a positive outcome for the disorder. Thus, pro-anorexia sites are particularly harmful because their audience is typically adolescent girls who at this age are likely to be in the early stages of their disorder. In addition, these sites promote rejection of treatment for anorexia sufferers.

Treatment for anorexia is a long-term process and often requires hospitalization. This makes the treatment relatively expensive. In a piece in medical finance for *The New York Times*, Lesley Alderman (2010) wrote that residential programs can, on average, cost \$30,000 a month as patients often meet weekly with a physician, psychiatrist and nutritionist. Additionally, most patients need at least three months in a residential facility



and many need long-term outpatient care after their time in the residential facility has ended (Alderman, 2010). This is in addition to the debate among treatment providers as to the best approach to treat anorexia.

The nuanced debate among practitioners treating anorexia nervosa can result in some insurance companies concluding that there is not strong enough evidence that treatment for anorexia nervosa is effective for aiding the recovery process (Alderman, 2010). This leaves many health insurance companies to routinely deny coverage for AN treatment (National Eating Disorders Association, 2013). This is in spite of evidence which has found the cost per year of life saved through utilizing adequate treatment approaches to anorexia is \$30,180 (Crow & Nyman, 2004). This is in comparison to the value of one year of life, which is estimated to range from \$25,000 to \$428,000 (Hirth, Chernew, Miller, Fendrick, & Weisster, 2000).

### **Pro-Anorexia**

In recent years the pro-anorexia, or pro-ana, movement has gained the attention of the media and researchers alike. Those who identify as “pro-ana” view anorexia as a lifestyle choice and, as such, development and maintenance of anorexia is encouraged (Williams & Riley, 2013). Additionally, they disseminate tips and tricks about continuing the disorder, as well as exchange inspirational, or ‘thinspirational’, images to community members (Dias, 2003). This phenomenon and community are organized around the Internet, making this community unique to the Internet age (Williams & Riley, 2013). According to the Associated Press (2005), the pro-anorexia movement has a cultish

appeal. Those in the community personify anorexia as “Ana” and revere her as a goddess by offering drawings, prayers and even a creed (Associated Press, 2005). Indeed the religious overtone felt by the community members can be seen in the rules of their community also known as the ‘thin commandments.’ These rules specify:

- “1. If you aren't thin you aren't attractive.
2. Being thin is more important than being healthy.
3. You must buy clothes, style your hair, take laxatives, starve yourself, do anything to make yourself look thinner.
4. Thou shall not eat without feeling guilty.
5. Thou shall not eat fattening food without punishing oneself afterwards.
6. Thou shall count calories and restrict intake accordingly.
7. What the scale says is the most important thing.
8. Losing weight is good/gaining weight is bad.
9. You can never be too thin.
10. Being thin and not eating are signs of true will power and success.”

### **Pro-Ana Websites**

There are numerous pro-anorexia websites readily available, with an estimated 500 in 2003 (Chelsey, Alberts, Klein & Kreipe, 2003). The number of these websites has grown, as a recent news article estimated there to be nearly 1500, in addition to a noted increase of pro-eating disorder content on social media sites (Hobbs, 2011). Rouleau & von Ranson (2010) reviewed the existing literature on pro-eating disorder websites, or

pro-ED, and identified three broad potential risks from the viewership of such websites. These risks included the operation of such websites under the guise of support, the reinforcement of disordered eating, and the prevention of help-seeking and recovery (Rouleau & von Ranson, 2010).

Over the past decade, trends in the type of content posted on these sites have been observed. In the early 2000s, prominent content areas on pro-anorexia websites included warnings to those recovering from eating disorders not to enter, instructions for beginning and continuing anorexia, tips and tricks for dealing with hunger, “thinspiration” images of underweight or emaciated women (mainly models and celebrities), links to other sites in the pro-ana community, site owner diaries and bulletin boards or chat rooms (Dias, 2003).

A 2006 review of pro-ana websites revealed many of the same content areas in addition to body mass index and calories burned calculators (Norris et. al., 2006). A recent review of pro-ana and pro-mia (sites promoting the practice of bulimia) sites found that a little over one third of the sites the researchers surveyed had recovery information available (Borzekowski, 2010). The reasoning for the appearance of this content area is somewhat unclear. It is likely that the increased media attention and pressure to domain name holders to shut down pro-anorexia sites led to the addition of this information in an attempt to avoid being shut down (Borzekowski, 2010).

In addition to the content areas identified, Norris et. al, (2006) identified ten common themes in pro-ana website content including control, success, perfection, isolation, sacrifice, transformation, coping, deceit, solidarity and resolution. Among the

most prevalent of these themes were control and perfection. In 2010, Haas, Irr, Jennings & Wagner identified four prominent themes on pro-ana social networking sites. They found that the community users were co-constructing “ana” as a personal identity, were expressing self-loathing, dispensing pro-ana advice, and providing encouragement for the pro-ana community (Haas, et. al, 2010). These themes illustrate the anti-recovery stance described by Fox, Ward & O’Rourke (2005). From this stance, the pro-ana movement community provides “participants a safe and positive place to share experience and gain further insight into their condition, away from the judgment, gaze and scrutiny of parents, boyfriends, husbands and medical professionals” (Fox et. al., 2005, p. 945). Though prevalence of overall usage is unknown, it has been estimated that 1/3 of patients with an eating disorder have utilized these websites (Christodoulou, 2012).

### **Pro-Ana on Social Media**

While pro-anorexia websites have been studied for nearly a decade now (Casilli et. al., 2012), pro-anorexia content on social media has received less attention. At the time of this writing, only three articles were obtained addressing this topic, two of which were published in the past year (2013). The following discussion will review these articles. Juarascio, Shoaib & Timko (2010) studied the prevalence and content of pro-eating disorder groups on Facebook and MySpace using inductive qualitative analysis (Juarascio et. al. 2010). To collect the pool of groups to analyze, the authors of this piece created a false profile of a young woman on both sites and entered into the search engines on both sites the following terms: “pro-ana, pro-mia, pro-ana mia, thinspiration, anorexia,

bulimia, anorexia and bulimia, eating disorders, and the names of four actresses frequently referred to in pro-ana posts on pro-ana Websites” (Juarascio et. al., 2010, p. 3). The searches yielded between 17 and 421 groups on MySpace and 33 to over 500 on Facebook (Juarascio et. al., 2010). They then selected the groups with the most members and frequent activity for analysis (Juarascio et. al., 2010). Open and closed groups were included in analysis if the closed groups gave permission to the researchers to join the group. Twelve groups from Facebook and 14 MySpace groups were analyzed (Juarascio et. al., 2010).

Two main content themes for posts were identified: (1) social support/interaction, and (2) eating disorder specific content (Juarascio et. al., 2010). On Facebook, but not MySpace, eating disorders and related symptoms were in the forefront of immediate discussion (Juarascio et. al., 2010). The social support and interaction theme included postings of introductory status with current and goal weights, statements of support and friendship, negative reactions to inappropriate content, and expressions of negative personal affect (Juarascio et. al., 2010). The eating disorder specific content included factual information about particular community members’ disorders, eating disorder disclosure and support, emotions regarding their eating disorders, thinspiration (which was far more common on Facebook) and tips about hiding community membership from family and loved ones (Juarascio et. al., 2010). Additionally, both sites had a number of anti pro-ana groups who were actively working towards having pro-ana groups removed from these sites (Juarascio et. al., 2010). The authors concluded that pro-ana groups on MySpace and Facebook are more geared toward providing social support to community

members, but that more research in this area needs to be conducted (Juarascio et. al., 2010).

Teufel et. al. (2013) analyzed the content and culture of anorexia nervosa related information on Facebook. By creating a false profile for a young female, the researchers identified groups and sites by category (education, self-help, professional help, pro-ana and anti pro-ana), activity, motivation and social support (Teufel et. al., 2013). Numerous groups from all categories were identified, except for the professional help category whose presence was nearly non-existent (Teufel et. al., 2013). Pro-ana groups were the most active, organized and supportive (Teufel et. al., 2013). Pro-ana groups utilized prose and pictorial motivation, but were found to use much more pictorial motivation than the other groups.

Syed-Abdul et. al. (2013) investigated misleading health information about anorexia promoted on YouTube, a social networking site where users upload self-made videos. Searching on October 11, 2011 on YouTube with the keywords anorexia, anorexia nervosa, pro-ana, and thinspo, these researchers obtained 140 videos with approximately 11 hours of video content (Syed-Abdul et. al., 2013). Three doctors classified these videos as either pro-anorexia, informative, or other. The researchers found that 29.3% of the obtained videos were pro-anorexia in topic and that these videos were favored three times as much as informative videos (Syed-Abdul et. al., 2013). These pro-anorexia videos were largely thinspiration videos which utilized photos of extremely thin models along with quotations regarding tips and advice for losing weight. One such example was a Spanish video with a thinspo nutritional pyramid including the following

advice “Smoke as much as necessary, or eat sugar-free chewing gum, use drugs such as Xenadrine, Reductil, etc, to lose weight.” Finally, minors were found to be the top viewers of videos flagged as inappropriate (Syed-Abdul et. al., 2013).

Lacking from these three studies is a systematic, longitudinal evaluation of pictorial content posted on social media websites. Additionally, none of the above-mentioned studies have investigated the pro-anorexia content or prevalence on Facebook, Pinterest or Tumblr since these sites have attempted to suppress pro-ana content. Further, none of these studies addressed what specific attributes of content prompt this content to become inactive. This study aims to address these issues regarding pro-ana content on social media.

### **Pro-Ana Community Dynamics**

A “True Ana” is a person who actually has anorexia nervosa and participates in the pro-anorexia community. A wannarexic is a person who does not currently have anorexia but feels that adopting anorexia as a lifestyle is a quick fix, glamorous and may make them popular (Cohen, 2007). For those who wish to interact on pro-ana community websites, key to the access to such an outlet is successful entry (Williams & Riley, 2013). ‘Newbies,’ or new members, often need to legitimize their attempts to join pro-eating disorder communities in order to be accepted into them (Stommel & Koole, 2010). In a one month of observation of new and established user exchanges on five pro-ana forums, Williams & Riley (2013) found that all new member posts were responded to and 57% of these posts spurred additional conversation between new and established users.

Successful newbie postings included providing adequate information about the poster to garner identification from another member, explicitly requesting support or advice so that established members could fulfill the role as a guide and writing that fit within the sites' behavioral rules and ideological framing of eating disorders (Williams & Riley, 2013). Williams & Riley (2013) also found that these websites offered community support and a platform for those seeking a partner in their disordered eating.

### **The Effects of Viewing Pro-Ana Content**

The glorification of risky behaviors in the media has a positive relationship with risk taking inclinations, which includes risk taking behavior, cognitions and emotions (Fischer, Grietemeyer, Kastenmuller, Vogrinic & Sauer, 2011). The risks deriving from the viewership of pro-ana websites is a relatively new line of research, beginning in 2006 with a limited number of studies published. Evidence of the potential harm that could be posed to women who view pro-ana images can be found in a pilot study by Bardone-Cone & Cass (2006). This experimental study with 24 female participants assigned women to view three different types of websites for 25 minutes. These websites were either a researcher developed prototypical pro-ana website, a fashion website using average-sized models or a home décor website (Bardone-Cone & Cass, 2006). Results showed that only those who viewed the pro-anorexia website experienced an increase in negative affect (Bardone-Cone & Cass, 2006). Specifically, only women in the pro-anorexia website condition evidenced decreased self-esteem, appearance self-efficacy and perceived attractiveness, in addition to an increase in perceived weight. While serious



and long-term harm is likely derived from participation on pro-ana communities, Bardone-Cone & Cass (2006) showed that passive viewing of such content can cause negativity to be felt regarding young adults' appearance.

Continuing this line of research with a larger sample of 265 female undergraduates confirmed that those women who viewed pro-anorexia websites reported decreased self-esteem, decreased appearance self-efficacy, and perceived themselves as heavier (Bardone-Cone & Cass, 2007). Additionally, participants who viewed pro-ana websites reported a greater likelihood of exercising and thinking about their weight in the near future, and these participants engaged in more media image comparisons (Bardone-Cone & Cass, 2007). Finally, this study found no significant moderating effects for viewers BMI but did find evidence for higher levels of perfectionism, producing more negative affect in those assigned to the pro-ana website (Bardone-Cone & Cass, 2007).

Wilson, Pebbles, Hardy & Litt (2006) investigated the effects of pro-ana websites on adolescents diagnosed with an eating disorder. These researchers found that a little over half of the parents of these patients knew about these websites, but only slightly over a quarter of parents had discussed these websites with their child (Wilson et. al., 2006). Slightly over 35% of patients reported visiting a pro-eating disorder website and 25% of patients had visited pro-eating disorder and pro-eating disorder recovery websites (Wilson et. al., 2006). Additionally, Wilson et. al. (2006) found that visitors of pro-eating disorder and pro-recovery websites learned new weight loss or purging techniques and both types of users were hospitalized more than those diagnosed with an eating disorder who did not visit either type of website.

In 2008, Harper, Sperry & Thompson investigated the relationship between pro-eating disorder websites and concurrent body dissatisfaction and eating disturbance. In this study, 1575 women were surveyed for a variety of eating disorder websites from those promoting eating disorders to those providing information about them (Harper et. al., 2008). These researchers found that the pro-eating disorder viewers reported higher appearance dissatisfaction, body dissatisfaction and levels of restrictive eating (Harper et. al., 2008). Custers & Jan Van den Bulck (2009) in a survey of pro-anorexia website usage among 711 secondary students found that 12.6% of girls and 5.9% of boys had visited such websites. Additionally, visiting such websites was associated with a higher drive for thinness, worse perception of appearance and increased perfectionism (Custers & Jan Van den Bulck, 2009). Finally, Jett, LaPorte & Wanchisn (2010) investigated the impact of exposure to pro-eating disorder websites on eating behavior in college women. Their participants were exposed to these websites on two separate occasions for 45 minutes (Jett et. al., 2010). These researchers found that, on average, participants exposed to pro-eating disorder websites reduced their weekly calorie intake by 2470 calories (Jett et. al., 2010).

A more recent study investigated the effects of both thinspirational and pro-eating disorder content and the effects of viewing such hosted on LiveJournal (a blogging website), YouTube and a pro-anorexia website (Stonebridge, 2012). The research found the anti pro-ana and the pro-ana communities engaging with each other in the comments for the thinspiration videos (Stonebridge, 2012). Further research has shown this back and forth “conversation” between the pro-ana community and the pro-recovery

community to be ineffective at stopping the proliferation of pro-ana materials by the community (Yom-Tov, Fernandez-Luque, Weber & Crain, 2012)

A survey of this community found that most girls viewing this content were from the US and the UK, but that there were also girls from Australia, Mexico and New Zealand. The girls were also mainly between the ages of 17 and 25, and over 80% were Caucasian (Stonebridge, 2012). Responses to open-ended questions about how they felt after looking at thispirational content revealed that the girls felt motivated to continue towards their weight loss goal, whereas before looking at the thinspirational content they felt fat, depressed and hungry. Finally, an interview with Julie Mallory-Church, the assistant director of Rowan University's Counseling & Psychology Center, revealed that eating disorders are seldom developed in social media communities, but these communities are a factor in furthering the obsession with food and body weight of the community members (Stonebridge, 2012). Social cognitive theory may explain why this happens. According to this theory, social learning and behaviors are acquired in a social setting (Bandura, 1986). Therefore, those already influenced by the sociocultural beauty message may seek out this community as a way of obtaining the thin idealized body. If they identify with those in the community, they may begin to mirror their reported behaviors.

### **Pro-Ana Offline: How the Pro-Ana Movement Affects the Offline World**

Kate Moss uttered the now common mantra of the pro-ana community, "Nothing tastes as good as skinny feels" when asked if she had a motto she lives by (Costello,

2009, p. 1). Recently, the British Advertising Standards Agency banned advertisements for a T-Shirt being sold for girls as young as ten with Moss' words printed across the front (Poulter, 2011). The US-based company, Teen Modeling, sold under the brand name Zazzle in the U.K., was forced to remove the slogan from the T-Shirts. The company was also selling infant girls 'onesies' with the slogan "Please don't feed the model." This company was widely criticized for offering a potentially dangerous product to such a vulnerable population.

According to a recent piece on ABC News "Good Morning America," the body trend of the thigh gap, or the empty space that can be seen between the thighs when a girl is standing with her knees together, is becoming an obsession for teenage girls (ABC News, 2013). According to the high school girls interviewed for this piece, they all had friends who were obsessed with getting the thigh gap. Clothing suggested that could show off a thigh gap included tight jeans and leggings (ABC News, 2013). Additionally, the message was communicated to these girls through social media websites such as Facebook and Tumblr (ABC News, 2013). The girls interviewed felt that the most popular pictures on Tumblr were those showcasing really beautiful and thin girls which made them feel the pressure to be one of the 'Tumblr girls' (ABC News, 2013). The motivation to strive for this 'thigh gap' was revealed in the interview to be a quest for popularity and status, not for attention from boys (ABC News, 2013).

Due to the concern raised by those who treat eating disorders and parents of vulnerable adolescents, censorship of such content has been investigated. Martijn, Smeets, Jansen, Hoeymans & Schoemaker (2009) studied the efficacy of using a warning

message over the course of a year on websites hosted on a Dutch server. About one third of the 537,964 initial hits, or 180527, were deterred from entering the pro-anorexia website (Martijn et. al., 2009).

### **Corporate Social Responsibility and Fashion Industry Elitism**

"They don't work for some women's bodies. It's really about the rubbing through the thighs, how much pressure is there over a period of time, how much they use it,"

-Chip Wilson, CEO of Lululemon (Greenfeild, 2013, p. 1)

When asked to respond to product problems regarding pants transparency and wear and tear problems, Chip Wilson explained that it was not the products which were at fault, but the consumers who wore the products with the wrong body type. This focus on the malleability of women's bodies in the fashion industry could lead to negative body image and dangerous activities in order to obtain a "fashionable" body. Social responsibility in the fashion industry is increasingly becoming a topic that academics and smaller companies are attempting to address (See Dickson & Eckman, 2006). Companies who are perceived as acting against the public good through socially irresponsible behavior face consequences in both profit and company image (Porter & Kramer, 2006).

The fashion industry uniformly promotes an unobtainable ideal of thinness and beauty. According to Barber (1998), women living within thin idealizing cultures are

more likely to develop an eating disorder than those living in cultures which do not have this ideal. Internalization of this thin ideal is a risk factor for the development of anorexia nervosa (Thompson & Stice, 2001). There is a well-established link in correlational and experimental research between exposure to the thin ideal from fashion images and increased body dissatisfaction (Grabe et. al., 2008).

Thus far, the fashion industry has been resistant to endorsing a more diverse body ideal. For example, heavy criticism fell on the industry in 2006 after two models died within three months of each other due to complications from anorexia. Following this tragedy during European fashion week, Italy and Spain signed self-regulating codes into effect, banning models that have Body Mass Indices of less than 18 and 18.5 respectively from fashion shows (Bender, 2007). This trend was not followed by other countries with prominent fashion industries. Following the deaths of these models, the Council of Fashion Designers of America formed a health committee that issued several recommendations, none of which referred to a minimum weight that should be maintained by a working model (Bender, 2007).

The fashion industry has also been reticent to address the needs of plus-sized fashion consumers. Greater demand exists than supply for fashionable plus-sized clothing, which tells women that if they want to be fashionable, they must be slim. Wall Street Journal fashion columnist Christina Binkley reports that the reason for the reluctance to meet the needs of the plus-sized market is that fashion relies on imagery of thin, beautiful women to sell their products and they do not want to be associated with 'fat' (Binkley, 2013). Convention in the industry has argued that plus-sized women do

not buy as many clothes as thin women (Binkley, 2013b). However, this maybe more of a result of limited plus-sized options than a proclivity of plus-sized consumers, as research has shown that when clothing is fashionable and fits well, plus-sized customers spend more per order and order more than regular-sized consumers (Binkley, 2013b).

### **Customer Exclusion versus Inclusion**

The thin ideal of the high fashion industry so prevalent in advertising is often mirrored in mass fashion businesses as well. For example, the CEO of Abercrombie and Fitch, Mike Jeffries in a 2006 interview, candidly laid out his personal policy on consumer exclusion in the Abercrombie brands. He famously offered:

*“In every school there are the cool and popular kids, and then there are the not-so-cool kids...Candidly, we go after the cool kids. We go after the attractive all-American kid with a great attitude and a lot of friends. A lot of people don’t belong [in our clothes], and they can’t belong. Are we exclusionary? Absolutely. Those companies that are in trouble are trying to target everybody: young, old, fat, skinny. But then you become totally vanilla. You don’t alienate anybody, but you don’t excite anybody, either.” (Denizet-Lewis, 2006, p. 2)*

Abercrombie & Fitch has also been accused of racism, ageism and sexual harassment towards employees of the company. The retailer recently had to pay \$40 million dollars in damages to employees claiming that their race or the fact that they were female

prevented them from working in a sales capacity or being promoted (Greenhouse, 2004). Additionally, a pilot working for Mike Jefferies claimed that he was fired from his job due to the company's preference for younger employees (Hines, 2012). Finally, a male model accused Abercrombie and Fitch's casting director of persuading him to masturbate nude before the photo shot. The male model then claims the casting director exposed himself and began commenting on the sizes of their penises (Roberts, 2010).

Abercrombie & Fitch's financial performance over the past 8 years has been rocky, suffering and rebounding from several lows in their stock exchange values (See NYSE:ANF, 2014). Among the risk factors internally identified as having the potential to adversely affect the company's profitability are their subjugation to advertising laws, the exposure from litigations the company has suffered, and potential failure to protect the company's reputation (Abercrombie & Fitch Corporation, 2013). Expanding on this last point, Abercrombie & Fitch states "public perception about our products or our stores, whether justified or not, could impair our reputation, involve us in litigation, damage our brands and have a material, adverse effect on our business" (Abercrombie & Fitch Corporation, 2013).

Abercrombie & Fitch is hardly the only fashion brand to specify a body ideal for their target customers. Retailer H&M came under fire in 2011 for digitally imposing real model faces onto computer generated bodies (Kindelan, 2011). A representative of the Norwegian Broadcasting Corporation, where the story broke, accused H&M of creating literally unobtainable physical body ideals (Kindelan, 2011). H&M maintained that they intended to use these 'models' as digital mannequins and nothing more (Kindelan, 2011).



The thin ideal spans the fashion market from mass to high-end fashion. According to Karl Lagerfeld, creative director for Chanel, “No one wants to see curvy women. You've got fat mothers with their bags of chips sitting in front of the television and saying that thin models are ugly” (Malloy, 2009). As these examples illustrate, there are many designers and brands in the fashion industry who adopt a malleability attitude towards the female body, wherein if you want to be able to wear their clothing, you must be thin. This attitude likely has contributed to Dickson & Eckman (2006) identifying the fashion industry’s impact on consumers’ body image as one of the main areas of corporate social responsibility that the industry needs to address.

Transitioning from the traditional retail store, internet retailer Modcloth.com offers size ranges from 0 to 30 for women and provides a company centered social media format for customers to engage with each other and with representatives of the brand. Additionally, the company offers the “Be the Buyer” opportunity to consumers where consumers can vote on whether or not the store should carry a particular item. The company also hosts several “Make the Cut” design contests where the winner is awarded a small amount of money in addition to having their design manufactured and sold by Modcloth- with the designer’s name on the label. According to the company, their mission is “to democratize the fashion industry and empower you with ample opportunities to have your voice heard” (Modcloth.com, 2014).

Modcloth.com users have been found to be liberal, creative and open to new experience (Kosinski, Bachrach, Kohli, Stillwell, & Graepel, 2013). In a representative, internal survey of 5,000 online consumers, Modcloth.com found that more women

reported wearing a size 16 than those reporting wearing a size 0 and 2 combined (ModCloth.com. 2013). Additionally, more than half of the women surveyed reported wearing some size 16 clothing (ModCloth.com, 2013). As a result of this survey, Modcloth.com widened the size range they offer in their online stores because the company believes that no matter a woman's size, they want to help every woman discover clothing designs which make her happy and feel her best (ModCloth.com, 2013). Additionally, Modcloth.com is committed to using a variety of body sizes in terms of their models and to building their online community by allowing consumers to post photos of themselves modeling garments they have purchased (ModCloth.com, 2013). Modcloth.com's success was evidenced in the company surpassing \$50 million dollars in sales in 2010 (Entrepreneur.com, 2010).

Modcloth.com's success maybe reflective of the slow transition to plus size acceptance currently happening in the fashion industry. Recently plus-sized model Kate Upton graced the cover of the June 2013 issue of Vogue (Binkley, 2013). However, it is important to note that plus-sized models typically range in size from 6 to 14 (Lovett, 2012). These sizes are standard for female consumers, but considered plus-sized for female models (Lovett, 2012). This misalignment of model and consumer body sizes reveals how heavily the thin ideal is proliferated in the fashion industry.

## **The Social Media Mediums: Facebook, Pinterest and Tumblr**

### *Facebook*

Facebook was founded in 2004 as a social networking site for Harvard University students and staff (Phillips, 2007). In 2005, the domain name Facebook.com was purchased and any United States, or United Kingdom university could use the site in addition to U.S. high schools (Phillips, 2007). In 2006, the network usage capability was extended to anyone with a registered email address (Phillips, 2007). Facebook usage has grown exponentially and now it is estimated that 1 out of every 7 people in the world has a Facebook account (Zeevi, 2013).

As Facebook is a recent social phenomenon, research on the characteristics of its users is in its infancy (Ryan & Xenos, 2011). In a survey of college student users, aged 18 to 29, from a large Midwestern university, Hargittai (2007) found that a majority of Facebook users were Caucasian women whose parents had gone to college. A survey of Australian adult users and non-users of Facebook between the ages 18 and 44 found that users of Facebook tended to be more narcissistic and extroverted but less conscientious and socially lonely than non-users (Ryan & Xenos, 2011). Additionally, these researchers found that the most preferred feature of Facebook for users of the website was photos (Ryan & Xenos, 2011). Further, narcissism and low self-esteem have been found to predict greater online activity (Mehdizadeh, 2010).

Research into the use of the Internet to construct identity has typically focused on anonymous online environments, such as chat rooms and bulletin boards (Zhao, Grasmuck & Martin, 2008). Recently, online identity construction has been investigated

on non-anonymous areas of the Internet like social media websites. In terms of Facebook, a study of user profiles which were publically available found that all users studied desired to project a socially desirable self-image (Zhao et. al., 2008). Additionally, an attempt to demonstrate user popularity was evident on the site (Zhao et. al., 2008).

### *Pinterest*

Launched in 2010, Pinterest is a pinboard style social media website which allows users to “pin” images to their interest boards and add text underneath them (Carlson, 2012). Unlike Facebook, Pinterest does not offer its users the ability to publically or privately message someone, but does allow users to comment on other users content (Ottoni et. al., 2013). Other users of the websites can then “repin” or “heart” (ie “like”), the post which enables rapid dissemination of popular content. Most of the early users came from co-founder and visionary Ben Silbermann’s hometown of Des Moines, Iowa (Carlson, 2012). Silbermann says the purpose of Pinterest is to help users connect with the most important things in their lives (Carlson, 2012). Additionally, the purpose of the site is to get users offline by inspiring them to do the things they love (Carlson, 2012). Pinterest has an estimated 17 million users as of 2012 (Carlson, 2012).

Ottoni et. al. (2013) found that a majority of Pinterest users in their study were female and that approximately 13% of women with a website available in their board were self-promoters. Mittal, Gupta, Dewan, Kumaraguru (2013) found that nearly 82% of Pinterest board users did not utilize a profile description and that those who did revealed personal information about themselves. The average number of followers on Pinterest

was 176 and that users on Pinterest had a comparable number of followers and followees (Mittal et. al., 2013). Of users who linked their Pinterest profiles to their Facebook profiles, only 7 percent were male (Mittal et. al., 2013). Health and fitness was the 5<sup>th</sup> most popular type of board and women's fashion was another popular type of board (Mittal et. al., 2013). Pinterest also introduced the ability to have a "secret board" only visible to the users who create them (Mittal et. al., 2013). Additionally, the linkage of malicious software to some pins was noted (Mittal et. al., 2013).

### *Tumblr*

In March 2005, Chris Neukirchen, a native of Germany, decided to make a website for hosting interesting links, quotes and pictures (Alfonso III, 2013). After seeing the websites success but limited design capabilities, Marcel Molina created Projectionist (Alfonso III, 2013). From there, David Karp launched a Projectionist inspired website with his friend Marco Arment in 2007 called Tumblr (Alfonso III, 2013). Tumblr is now one of the 10 most visited websites in the United States and host to more than 100 million blogs (Alfonso III, 2013).

### *Teenagers and Social Media Use*

Long (2013) wrote about three main trends regarding social media use among teenagers. Long reported that teens are starting to move away from Facebook towards other social media websites like Twitter and Tumblr. Additionally, Long (2013) reported that the amount of personal information disclosed by teenagers on social media is

increasing. Teenagers are increasingly making information like their cell phone numbers available on these websites (Long, 2013). However, teenagers are becoming mindful of who they share this information with, as few of them maintain public profiles (Long, 2013). Finally, few teenagers were concerned with third party access to their personal information (Long, 2013).

## **Theoretical Perspectives**

Deciphering the theoretical differences in the development of anorexia nervosa in comparison to pro-anorexia is difficult. Those in the pro-ana community may not meet the criteria for an eating disorder or may have an eating disorder otherwise not specified. For this reason, theoretical frameworks which could be applied to both populations will be discussed.

This study draws on cultural and psychological theoretical perspectives regarding the development of anorexia nervosa. Specifically, this study draws upon sociocultural and cultivation theories, in addition to self-schema, social comparison and self-discrepancy theoretical perspectives in relation to the development of anorexia nervosa. The following section will discuss each of these theories.

## **Sociocultural Theory**

### *Core Principles of Sociocultural Theory*

According to Thompson, Heinberg, Altabe & Tantleff-Dunn (1999), “It is generally accepted that sociocultural theory offers the most robust theoretical account for

understanding the high levels of body dissatisfaction and disordered eating experienced by many women and girls in contemporary Western society” (quoted in Slater, Tiggemann, Firth & Hawkins, 2012, p. 106). Sociocultural theory stresses that a person’s cognitive development is a product of one’s environment, namely society and culture (Dahms et. al., 2008). Through the process of human interaction with the sociocultural environment, the growth and development of the individual and society are fostered, thereby allowing social meanings to emerge (Beach, Kincade & Schofield-Tomschin 2005). The formation of the self-concept, self-schemas and the information about the self which people seek to evaluate themselves against are conceived within the framework of the physical environment, as well as the social and cultural practices, norms and beliefs present in the environment (Tiggemann, 2012).

The sociocultural theoretical framework has been extended to incorporate how individuals learn about expected societal appearance standards. Jackson (2002) identified three main perspectives of sociocultural theory as it relates to personal appearance: self-expectancy, implicit personality and status generalization. From the self-expectancy perspective, it can be said that (1) there is a consensus within cultures about who is and is not attractive, (2) cultures have behavioral expectations based on attractiveness, (3) people are treated differently based on their physical attractiveness with preferential treatment often given towards people who are more physically attractive, (4) this differential behavior results in different responses and (5) these social interaction differences based on attractiveness influence individual self-concepts (Jackson, 2002). The implicit personality perspective purports that the category label of attractive is

assumed to be linked to a number of desirable attributes. Finally, the status generalization perspective explains that external status characteristics generate performance expectations and more positive expectations are held for attractive people (Jackson, 2002). The unifying theme in these three perspectives is the cultural emphasis on meeting the ideal standard for female beauty as a pre-requisite for being perceived favorably in society.

### *Sociocultural Theory and Eating Disorders*

Media, family and peers have been proposed as the main transmitters of sociocultural ideals (Tiggemann., 2012). The media constantly surrounds women with images of beautiful, impossibly thin women, implying that the only women worthy of such prominence are beautiful and thin. Research has shown that television influences the beliefs young adults have regarding society and those who inhabit a society (Lett, DiPietro & Johnson, 2004). Introduced by Gerbner, Gross, Morgan & Signorelli (1980), cultivation theory proposes that television has the ability to shape our perceptions of social reality, over time, through the cumulative effects of widespread television exposure. Gerbner et. al. (1980) postulates that exposure to mass media ‘cultivates’ viewers attitudes and values, attitudes and values which already exist within a culture. Mass media serves to promote and reinforce these cultural attitudes and values. Cultivation effects are typically strongest when motivation or ability to process information is low and the effects tend to be negligible or absent when motivation or ability to process information is high (Shrum, 2009). It would stand to reason that print



media communicating the thin ideal would result in stronger cultivation effects as motivation, while casually browsing magazines would be lower than watching a television program. Tiggemann (2003) investigated the differences between television viewing and magazine reading in relation to body image. She found that while body dissatisfaction was correlated with both types of media exposure, only the amount of magazine reading was positively correlated with internalization of the thin ideal (Tiggemann, 2003). According to cultivation theory, the more exposure a viewer has to such media, the greater the risk of harm for the development of eating disordered symptoms (Hesse-Biber et. al., 2006).

Perceptions of physical attractiveness are intertwined with assumptions of thinness. For example, Rothblum, Miller & Garbutt (1988) found evidence that overweight and obese female job applicants were rated more negatively on potential job performance skills. Interestingly though, when level of perceived applicant attractiveness was controlled for, negative stereotypes for overweight and obese applicants were significantly reduced. This result suggests that it is not the ‘fat’ itself that causes weight bias towards heavier women, but the negative impact on perceived physical attractiveness, a characteristic of heightened importance for women in the American sociocultural environment. A rival explanation to the ideal of thinness has been the waist-to-hip ratio explanation. In this evolutionary viewpoint, women with lower waist-to hip-ratio are perceived as more physically attractive due to this body type’s link to fertility. However, Puhl & Boland (2001) found evidence that across underweight, normal and overweight conditions, men and women perceived female figures who were underweight

as more attractive and this was regardless of hip-to-waist ratio. This result lends more support to the sociocultural perspective over the evolutionary perspective for cultural determinants of female beauty.

Still, some doubt the casual influence that media has on the development of body dissatisfaction and subsequent eating disorders in women. This doubt is understandable, due to the majority of experimental studies on the subject being performed cross-sectionally after brief exposure to media images. Becker, Burwell, Herzog, Hamburg & Gilman (2002) provide perhaps the strongest evidence for a causal link media exposure to the beauty ideal and the development of disordered eating behaviors and attitudes. In their study, the researchers measured scores on the disordered eating attitudes test in the Fujian province of Nadroga before and after the introduction of television to the culture (Becker et. al., 2002). After the introduction of television, scores on the disordered eating attitudes test rose 16.5%, while self-induced vomiting incidences rose from 0 to 11.3%. Fijian girls living in a household with a television were three times as likely to report disordered eating attitudes (Becker et. al., 2002). Finally, the prevalence of trying to diet to lose weight rose from 0 to 69%, while feelings of being too fat or too big rose from 0 to 74% (Becker et. al., 2002). These results display the role that a culture's media can have in the development of an eating disorder.

Family members, particularly mothers for their daughters, play a role in the dissemination of sociocultural appearance standards, especially considering that they have been socialized by these standards as well. As media exposure is relatively high for most women, the various degrees to which eating pathology develops is likely a function

of the internalization of sociocultural ideals and the perceived pressure to meet them as elicited by the media and close, interpersonal others. Previous research has found that maternal internalization of sociocultural ideals and preoccupation with weight and eating are related to maternal pressures for daughters to lose weight and the development of disordered eating attitudes in daughters (Francis & Birch, 2005; Cooley, Toray, Wang, Valdez, 2008).

Peers too can influence one's body image and the perceived need to change appearance. Teasing and negative appearance-related feedback is one way that family and peers can detrimentally impact a girl's body image. Adolescent girls who are teased about their weight, body shape and appearance are more likely to diet and to be at higher risk for higher levels of sociocultural ideal internalization, social comparisons, restrictive and bulimic behaviors and lower self-esteem (Lieberman, Gauvin, Bukowski & White, 2001; Keery, Boutelle, van den Berg, & Thompson, 2005).

### *Feminist Perspective on Body Image in the Sociocultural Environment*

In present society, inordinate pressure is placed upon women to be thin (Hesse-Biber et. al., 2006). In accordance with feminist perspectives on the environment and AN development, anorexia has had a history of emerging in higher rates among women who live in patriarchal, individualistic societies (Silverstein & Perlick, 1995). According to Goodman (2002), women are well aware of the social valuation between economic success and thinness. Additionally, women reported an association between thinness goals and a feeling of power (Goodman, 2002). Wolf (1991), claims the media and

fashion industries attempt to sabotage the gains of women over the past twenty years by coercing women to strive to attain the impossible thin ideal and an immaculately constructed physical appearance.

In patriarchal societies, women have less ability to display agency in the building of their life situation. However, the value placed on individualism in these cultures tells women that they are responsible for ensuring their own success (Hesse-Biber et. al., 2006). American culture sends a strong message to women, that only beautiful and thin women will be valued and loved. This message creates an ideal female body where thinness becomes a sign of success, health, and being in control on one's life (Hesse-Biber et. al., 2006). Obtaining a physically attractive appearance epitomized by a thin body is a means for women to align themselves in successful heteronormative relationships with men. Simultaneously, 'fat hatred' is permeating the United States culture, as prejudice against the overweight and obese is seen as an acceptable form of prejudice (Rothblum & Solovay, 2009; Puhl & Brownell, 2003). Obese individuals experience negativity from society because they are perceived as having defects in character deriving from the American social ideology that negative personal outcomes derive from negative personal traits (Crandall, 1994). Therefore, women are simultaneously exposed to the cultural messages that "thin is good" and "fat is bad."

## **Self-Schema**

### *Core Principles of Self-Schema*

A cognitive representation of organized information about the self, including thoughts and feelings related to one's self-image, is a self-schema (Markus, 1977). Such cognitive representations sort through self-relevant and non self-relevant information depending upon the schema (Markus & Wurf, 1987). Individuals pay more attention to, process more quickly, recall more readily and infer from self-relevant behavior, while inconsistent information is met with resistance (Markus & Wurf, 1987). Schemas direct the processing of information and are formed by the repeated categorization and evaluation of a particular behavior in oneself and others (Markus & Smith, 1981).

Accessibility comes into play in self-schemas as people pay more attention to information that is relevant to the schemas they have already formed about themselves. For instance, if a person is schematic on appearance, they are more likely to have this personally relevant schema accessible in their mind with which they would process information about other people (See Markus & Wurf, 1987; Markus & Zajonc, 1985). Having some schemas consistently accessible allows a person to selectively process information, disregarding the information which received no attention.

The valence of a particular self-schema also has behavioral impacts. Persons with positive self-schemas in some behavioral domain are more likely to experience positive feelings while engaged in the behavior and more likely to follow through on behavioral intentions (Kendzierski, 1988; Kendzierski & Whitaker, 1997). However, if a person has

a negative self-schema in some domain, they are more likely to experience anxiety and have contextually dependent evaluations of the self (Andersen & Cyranowski, 1994).

### *Appearance as a Self-Schema*

Appearance self-schemas are cognitive structures regarding appearance that serve to organize and determine self-relevant information (Cash & Lebarge, 1996). According to Hargreaves & Tiggemann (2002), schema theory offers a mechanism and an explanation for the effects of media on body dissatisfaction. As a mechanism, self-schema operates through exposure to attractive models in the media, people's appearance schemas are then activated, leading to heightened awareness for other schema-related information (Hargreaves & Tiggemann, 2002). Those who are schematic on appearance are then selectively attentive to appearance-related information of all material as appearance is a more important aspect of the self (Hargreaves & Tiggemann, 2002). As appearance schematicity varies, so too does individual vulnerability to developing body dissatisfaction from exposure to thin idealizing media (Hargreaves & Tiggemann, 2002).

Hargreaves & Tiggemann (2002) propose that women who have self-concepts which are not very diverse and more heavily valenced towards negative self-schemas will not have positive affect resources necessary to facilitate meaningful goal-directed behaviors. Additionally, these women will be more likely to experience negative affects, such as, avoidance behaviors and behavioral inhibitions deriving from negative self-feelings (Hargreaves & Tiggemann, 2002). Possessing these self-concept characteristics

could predispose some women to focusing on their body weight as a principal definition of self (Hargreaves & Tiggemann, 2002).

### *Appearance Self-Schema and Body Image*

Women who are schematic on appearance have been shown to evidence lower body image, self-esteem and higher negative mood than women aschematic on appearance (Jung & Lennon, 2003). Brown and Dittmar (2005) found that women who experience the most negative affect from viewing thin ideal models have higher levels of internalizing this norm of beauty, and this internalization moderated their level of personal appearance schema activation. Additionally, participants giving high attention to thin ideal models experienced intensified weight-related anxiety, independent of appearance schema activation or degree of internalization (Brown & Dittmar, 2005). Brown & Dittmar (2005) also found that, at low levels of thin ideal internalization, appearance schema activation became insignificant in predicting weight-related anxiety. These results suggest that societies with a thin ideal can predispose women to feeling weight-related anxiety merely from exposure to this ideal; however, the degree to which this exposure is detrimental to a woman's body image is likely dependent upon the individual's appearance schema and level of this ideal internalization.

The importance of appearance self-schema in explaining body image disturbance partially lies in the fact that this construct transcends cultural contexts. For example, Jung & Lee (2006) studied undergraduates in the United States and South Korea in order to conduct a cross-cultural comparison of self-schema, body image, self-esteem and dieting

behaviors. They found that women in both cultural groups with high appearance schemas were less satisfied with their bodies and had lower self-esteem than women who were less schematic on appearance (Jung & Lee, 2006). Additionally, these researchers found that women in the United States and those with larger discrepancies between their current and ideal BMI reported engaging in more dieting behavior (Jung & Lee, 2006). They concluded that, regardless of cultural background, those who placed a higher cognitive importance on appearance may develop negative images of their bodies and selves. Additionally, culture can account for some of the differences found in these two samples, such as the observed lower levels of appearance satisfaction and body satisfaction reported by Korean respondents compared with United States respondents (Jung & Lee, 2006).

#### *Appearance Self-Schema and Eating Disorders*

Stein (1996) proposed a framework that self-schema works within to explore the role of the self-concept and eating disorders. According to Stein (1996), there are several important sources of individual differences in the self-concept, including (1) the number of schemas in the self-concept, (2) the content of the self-concept, (3) evaluative attitudes associated with self-schemas, and finally, (4) the accessibility of self-schemas. Stein proposed that the self-doubt, incompetence, low self-esteem and fear of losing control that are common to women with anorexia nervosa and bulimia nervosa may reflect the lack of a broad and diverse array of positive self-schemas in the available memory. In an



attempt to alleviate distress and establish a sense of identity, a person with few positive self-schemas may attribute heightened importance to her body weight (Stein, 1996).

Hargreaves & Tiggemann (2002) found that anorexic participants had less positive self-schemas and more negative self-schemas. Additionally, the presence of positive and negative self-schemas, along with self-concept interrelatedness and BMI, accounted for between 21% and 39% of the variance in disordered eating attitudes and behaviors.

Williamson, White, York-Crowe & Stewart (2004) developed a model to explain the organization of cognitive aspects of the development of eating disorders. The feedback loop created by the exposure to certain stimuli may be seen as an obsession and/or overwhelming anxiety (Williamson et. al., 2004). Obsession with body size and eating exacerbates a negative emotional state. The person feels that they must do something to escape these feelings (Williamson et. al., 2004).

Self-schemas impact the development of different “selves” and when there is a discrepancy between the current self and an ideal or ought self, this is a self-discrepancy (Higgins, 1987). A self-discrepancy can bring about anxiety or depressive feelings which prompt behaviors to bring the two ‘selves’ closer together (Higgins, 1987). Not everyone will have only ideal or ought self guides; some may have both, 1 type or neither type (Higgins, 1987). Should multiple self-guides exist, construct availability and the strength of the discrepancy will moderate the negative affect felt (Higgins, 1987). Previous research has shown that girls who are high in actual/ideal self-discrepancies are more likely to engage in appearance-based social comparisons to thin ideal models, resulting in greater depression and lower self-esteem (Vartanian, 2012). Jung, Lennon & Rudd (2001)

found that women high in appearance self-discrepancy were less satisfied with their bodies, their overall appearance, were lower in social and global self-esteem, rated their appearance lower, and exhibited higher investment in appearance (Jung et. al., 2001). Additionally, appearance self-schema independently predicted appearance orientation, while appearance self-schema and self-discrepancy together predicted body dissatisfaction and overall appearance dissatisfaction (Jung et. al., 2001).

## **Social Comparison**

### *Core Principles of Social Comparison Theory*

Social comparison is one mechanism through which individuals gather information about the self. Festinger (1954) asserted in his proposal of social comparison theory that people are motivated, or have a drive, to evaluate their opinions and abilities. However, in the absence of objective measurements with which to assess them, people will compare their opinions and abilities to other people. Additionally, Festinger (1954) proposed that whenever possible, people will compare themselves to similar others and that these comparisons will create a pressure towards uniformity in the case of opinions, as they are malleable and abilities are not. Additionally, when a discrepancy is detected in the comparison process, people are motivated to change themselves or others in the group to reduce the discrepancy. Finally, an increase in the importance of an ability or opinion will increase the pressure to reduce the discrepancy. The stronger the attraction to the group, the stronger the pressure towards uniformity within that group will be.

Through extensive research, the theory has undergone significant revisions. While Festinger (1954) postulated that people consciously seek out similar comparison targets, it has been found that non-deliberate comparisons may occur and reference points for the comparisons can be individuals dissimilar to the self (Suls & Wheeler, 2000). A second important revision is that social comparisons occur outside the dimensions of opinions and abilities, such as personal traits (Wood, 1989). Wheeler & Miyake (1992) found that women were significantly more likely to compare themselves on physical appearance and eating habits in comparison to men.

### *Motives for Social Comparison*

At the core, social comparisons have to do with uncertainty in some domain of the self (Halliwel, 2012). Festinger (1954) was concerned with the self-evaluation motive of social comparison. Through self-evaluative social comparison, individuals seek to determine their position on the compared domain (Suls & Wheeler, 2000). Festinger (1954) asserted that similar others would provide more accurate information for self-assessment. Similarity can be based on belonging to the same social category, for example gender, or even a more superficial categorization, such as having the same birthday (Wood & Taylor, 1991; Young, Gabriel & Sechrist, 2012).

Research has identified two other possible motives for social comparisons, self-enhancement and self-improvement (Suls & Wheeler, 2000). Self-enhancement social comparison involves comparison with inferior others as a way to enhance self-perception (Suls & Wheeler, 2000). A person currently experiencing negative affect can enhance

their well-being through downward social comparison (Wills, 1981). Additionally, those low in self-esteem are more likely to seek interpersonal feedback while those high in self-esteem are more likely to seek competency feedback (Vohs & Heatherton, 2001). Self-improvement motivated social comparisons utilize upward social comparisons and can also be effective for people experiencing ego threat by providing inspiration and information on how one may improve (Suls & Wheeler, 2000).

### *Directions for Social Comparison*

The affective consequences of comparison are influenced by the direction of the comparison (Morrison, Kalin, Morrison, 2004). Upward comparison involves comparing oneself to an individual that is better off on the compared domain, which increase or decrease aspects of self-concept depending on the motivation of the comparison (Suls & Wheeler, 2000). Downward comparison involves comparing oneself to an individual that is worse off in the compared domain (Wills, 1981). These types of comparisons can enhance aspects of the self-concept and as such are typically prompted by ego threat (Suls & Wheeler, 2000). Additionally, the choice of comparison target can impact the affective outcomes. Universalistic, or distant sources of influence, elicit more pressure to conform to idealistic standards than do particularistic, intimate targets (Morrison et. al., 2004).

One key factor influencing the affect felt after comparison is changeability/controllability, such that if the person perceives the compared dimension to be under their control and changeable, upward comparison will typically result in

negative affective feeling and often spur behavioral changes to reduce the distance between the comparator and the comparison target (Major, Testa & Bylsma, 1991). The controllability aspect of social comparison is particularly problematic, as the fashion industry promotes the idea that women's bodies are malleable. Additionally, the relevance of the compared domain to the comparing person impacts the affect felt from a social comparison, such that the comparer is most impacted by comparisons with similar others on relevant domains (Tesser, 1988).

### *Assimilation and Contrasting Effects of Social Comparison*

Assimilation effects of social comparison indicate that the comparer perceives similarity with the compared target, while contrasting effects of social comparison point to the comparer perceiving difference between themselves and the compared target (Buunk & Gibbons, 2007). According to Smith (2000), emotions felt from social comparisons are a function of not only the target choice, but also the perception of similarity between the comparer and the target. Previous research has shown that contrasting upwards and assimilating downward comparisons lower mood and self-evaluation (Buunk & Gibbons, 2007). For upward comparisons, Smith (2000) proposes that assimilative effects are evidenced in feelings of admiration, inspiration and optimism, while contrasting effects result in feelings of resentment, envy and depression. The results from these contrasting effects have been the focus of many studies involving the effects of social comparison on body image (Young et. al., 2012). In a different twist on the effects of upward comparison on body image, Young et. al. (2012) found that

women who perceived similarity between themselves and their favorite celebrity reported higher body satisfaction than the control group.

### *Social Comparison Theory and Body Image*

Social comparison theory is one of the most widely cited theories in relation to body image. In terms of body image, comparison of a person's weight, shape and/or overall appearance to others gives the person information about their relative appearance (Tiggemann, 2012). Previous research has shown that exposure to the media's thin ideal is positively related to increased body dissatisfaction, thin ideal internalization and disordered eating attitudes (Grabe et. al., 2008). Social comparison theory is proposed to be the mechanism behind these relationships and there is evidence that those with anorexia make more unfavorable social comparisons, which indicate perceived low social status, than a peer control sample (Grabe et. al., 2008; Troop et. al, 2003).

Using social comparison theory, Rudd & Lennon (1994, p. 165) proposed a model of self-presentation. According to Rudd & Lennon (1994), their model was based on the belief that the beauty ideal of a particular culture is internalized as the personal standard that individuals use to create their personal appearance and against which individuals compare themselves to others. Women create their appearances to approximate the cultural ideal and evaluate how well they have done based on the perceived evaluations from others, as well as socially comparing themselves to others (Rudd & Lennon, 1994). If the created appearance is close to the ideal, higher self-esteem results, which can lead to the development of a strong self-image (Rudd & Lennon, 1994). However, if the

person constructing the appearance perceives that their constructed appearance falls short of their ideal appearance, they may fail to exit the appearance construction cycle and continually try harder to achieve this aesthetic ideal. This is the route commonly associated with sufferers of anorexia, as they perceive that they are never thin enough.

### **Theoretical Relations**

The sociocultural environment dictates and emphasizes values and norms, including the need for women to tend to and enhance their physical appearance. This message is communicated and further emphasized through the various media. A person's self-schema determines whether appearance is a value to a particular person and subsequently if a person will make appearance-related social comparisons or have appearance-related self-discrepancies. In this study, the content analysis will examine which type of media is circulated through the pro-anorexia community on social media. Additionally, the beauty prototype internalized as a self-schema for community members will be investigated by the most prevalent appearance characteristics.

## **Chapter 3**

### **Methodology**

This chapter will detail the qualitative content analysis strategy utilized in this research project, along with the proposed operationalization of variables and procedures. This chapter also includes data selection and analysis methods.

#### **Overview of the Research Project**

Previous literature is limited in the area of pro-anorexia on social media. Additionally, research investigating effectiveness of the individual website's revised user agreements has not been performed. Facebook revised user agreements in 2008 and was followed in 2012 by Pinterest and Tumblr, at least in part to attempt to suppress pro-anorexia content (Castillo, 2012; The Economist, 2012). The purpose of this research was to extend previous research by observing pro-anorexia content on these three social media sites. The observation of pro-anorexia content will begin with a preliminary search of the prevalence of the content and main characteristics displayed in the content.



Additionally, the role that posting self-harmful content plays in the longevity of these pages will be investigated. Finally, the major themes of this content will be analyzed.

To investigate these relationships, a qualitative content analysis was performed. There are several reasons why this type of analysis will be preferable to quantitative research analysis. The first reason is that due to the attempted suppression of the pro-ana community, self-identifying as pro-ana could be stigmatizing. People in this community could fear being shunned or forced into treatment for their lifestyle. This would make getting honest, quantitative responses less likely. Additionally, eating disorders often develop in adolescence (Zandian et. al., 2007). This age group would likely fear reprisal or forced treatment from their parents as a result of participation in a quantitative assessment. The material examined for the analysis was openly accessible public information. After consultation with the institutional review board, this research was classified as exempt as no interaction with human subjects occurred.

There were three stages of data observation in the present research. The first stage of the research was an Exploratory Phase of the content posted on the three social media websites. The data collection technique used for this exploratory study was “lurking.” In this collection technique, an online community is observed without interaction from the researcher. Only content which was publically available was analyzed, as uploaders of this content could reasonably expect to be observed by outsiders. To further minimize risk, the names of the observed forums will not be reported and any quotations utilized for thematic analysis will come from forums which are no longer active. Pages were searched and followed on Facebook, Boards were searched and followed on Pinterest and

tags were searched and followed on Tumblr. All content was searched for the key word “pro-ana” as this key term has received a notable amount of publicity and returned the most results.

### *Why These Three Sites?*

Three main social media outlets, Facebook, Pinterest, and Tumblr have attempted to suppress pro-anorexia by revising their user agreements. If this suppression is effective, the presence of pro-ana content on these sites should be minimal. Facebook’s policy on the promotion of self-harm can be found on the community standards section of their site. It states:

“Facebook takes threats of self-harm very seriously. We remove any promotion or encouragement of self-mutilation, eating disorders or hard drug abuse.”

(Retrieved October 13, 2012 from <http://www.facebook.com/communitystandards>).

Pinterest’s policy on the promotion of self-harm was located under the websites “Acceptable Use Policy” which states:

“You agree not to post User Content that: Creates a risk of harm, loss, physical or mental injury, emotional distress, death, disability, disfigurement, or physical or mental illness to yourself, to any other person, or to any animal” (Retrieved

October 13, 2012 from: <http://pinterest.com/about/use/>).

Additionally, Pinterest states that the website can remove content “for any reason or for no reason.” Though Pinterest does not specifically outline the promotion of eating

disorders in its revised policy, it does address the prohibition of the promotion of mental illness, which anorexia is classified as.

Tumblr's policy regarding the promotion of anorexia was located under the community guidelines section of this website. These guidelines state:

“Promotion and Glorification of Self-Harm. Don't post content that actively promotes or glorifies self-harm. This includes content that urges or encourages readers to cut or injure themselves; embrace anorexia, bulimia, or other eating disorders; or commit suicide rather than, e.g., seeking counseling or treatment, or joining together in supportive conversation with those suffering or recovering from depression or other conditions... We aim to sustain Tumblr as a place that facilitates awareness, support and recovery, and to remove only those blogs that cross the line into active promotion or glorification of self-harm.” (Tumblr, 2012)

All three websites address the broad aspect of self-harm. Facebook and Tumblr both qualify promotion of eating disorders as violations of their policies on self-harm. However, Tumblr has the most lenient policy, only restricting content that encourages readers to embrace anorexia instead of prohibiting the promotion of the disorder or the possibility of creating risk, as Facebook and Pinterest have done.

### **Study Justification**

Williams & Riley (2013) recommend that “further study is required to understand the social processes and functions of these (pro-eating disorder) online spaces and to track ongoing trends, as these forums represent varied communities that are ‘transient and

fluid' in their nature" (p. 3). Pro-anorexia is just emerging from its first decade of academic inquiry, and as such, much is left unknown (See Dias, 2003 & Casilli et.al.,2012). One specific area this research will address is the use of inspirational models as possible media or peer influencers. Additionally, this study will analyze the beauty ideal and the ideal body revered by this community to discover demographic patterns as well as particular parts of the body, which are particularly problematic for the community.

While pro-anorexia websites have received scholarly attention, pro-anorexia content on social media has received limited attention. Additionally, while the suppression of pro-anorexia websites has had limited success (See Casilli et. al., 2012), research has yet to examine the effectiveness of the attempted suppression of self-harm promoting content on the three websites in this study. This present study is especially timely, as Pinterest and Tumblr revised their policies in April of 2012. In addition, aspects of the pro-anorexia content resulting in inactivity will be analyzed.

Data for this study was analyzed over the course of 7 months from Facebook, Pinterest and Tumblr by typing the search words "pro-ana" into the pages search engine tab on Facebook, the boards search option on Pinterest, and the tags search option on Tumblr. The search was performed in September of 2012, December 2012 and April 2013. The search was performed in this manner for two reasons: (1) to obtain a realistic sampling of what a first time user would encounter and (2) the amount of content posted of various types on these websites led to this selection for the searches

Keeping track of pro-anorexia online content is sometimes difficult. Several studies have had complications due to pro-anorexia websites being taken down during the study's data collection (See Dias, 2003). For this reason, the content identified by the search was observed as it appeared on the site on the day of data observation. This method had the limitation of the exclusion of content change over time, but allowed an in-depth analysis of the websites at a specific moment in time.

### **The Exploratory Phase**

Data for the Exploratory Study was searched for on September 27th and 28th of 2012. This range of data inclusion ensured theory saturation. The primary researcher developed the coding by using an inductive approach to discover overarching themes (Lofland, Lofland, Snow, & Anderson, 2006). Content with each theme was mutually exclusive; however, content could be classified into multiple themes. For example, a picture could be coded as pro-ana, body-focused and showing a hip bone. The primary researcher then coded all content obtained. Next, a second coder independently coded the content according to this codebook. As can be seen from the codebook coding categories below, the coding for the data in this study focused more on manifest content, or content visibly present and countable, rather than latent data (data for which inferences are necessary). This is because latent content tends to be more reliable than manifest. Therefore, data used for descriptive, frequency and chi-square analysis was largely manifest content. For the initial coding, when inter-coder reliability levels (established by

Cohen's Kappa levels), for any individual category did not reach .7, coders discussed these discrepancies until agreement was reached.

In terms of the type of content, prevalent content attributes included (1) the post being pro-ana, not pro-ana or anti pro-ana, (2) user or media generated, (3) the type of post (text, picture or animation), (4) demographics of post if pictorial (gender, race, age in terms of over or under 30 and weight-thin, normal weight or overweight), (5) central focus of content (body, face, or object), (6) presence of self-harm (active or implied) or (7) weight focused. Under body-focused content, two themes emerged: bone and body area focused. For face themed pictures, the type of expression was coded for by way of positive, negative or neutral. Object focused content included food, clothing, text and other. Active types of self-harm included starvation, smoking, cutting and purging, while implied types of self-harm included starvation, smoking, cutting, purging and suicide. For the category of weight focused, sub-categories included self-deprecation and objectification, deprecation of 'fat' people and fear of fat, and before and after ana transformations. Additionally, the use of exercise as a coping mechanism for eating too much food was observed. Activity for all content was assessed after approximately six months (late March 2013) to see if this content was active.

*Main Variable Definitions (all coded as present or absent).*

Pro-Ana/Anti-Ana: Coded as positive endorsement or a characteristic pro-ana post (such as a thinspirational photo or motivational slogan) or negative statement about pro-ana community or posting of triggering photos.

User/Media Generated: User generated- outside of studio context, poor lightening, presence of mirror and reflection of person within it with camera flash, animations, graphics and textual posts coded as user generated unless recognized as part of another campaign; Media generated- well lit, recognizable figure used.

Text: Plain style text.

Picture: Pictures of real people and environments.

Animation/graphic: Non-human cartoon object or cartoon looking human, unrealistic colors for everyday life, the object is not real, only exists on paper, text only graphics.

Gender: coded female, male or both; determined by body type or the presence of makeup and facial structure.

Race: coded as Caucasian/non-Caucasian; determined by skin color/tone and/or, if present, facial features.

Age: coded as over/under 30 years old; coded by the tone of skin, absence/presence of wrinkles.

Weight: coded as thin, normal weight or overweight. Thin was determined as looking to be a size 4 or smaller/BMI of 19 or less. Normal was determined as wearing between a size 6 and 12/BMI between 19 and 24.9. Overweight was determined as wearing a size 14 or higher/BMI over 25.

Body Focused: central focus/frame of picture features the body (clothed or unclothed).

Face Focused: central focus/frame of picture features the face.

Object Focused: central focus/frame of picture features particular object such as clothing.

Self-Harm: active self-harm indicated a textual description or picture of doing or having done the specific self-harm.

Weight Focused: coded as weight inadequacy, self-deprecation & objectification, deprecation or hatred of ‘fat’ persons, body size comparisons, before and after ana pictures, and the use of exercise as a coping mechanism.

### **The First Phase**

Data for the first phase was searched on December 27th and 28th of 2012. For this phase, all pro-ana content found on Facebook and Pinterest, which met the outlined criteria for this study was analyzed. Due to the amount of pro-ana content found tagged as pro-ana on this search on Tumblr, this data set was reduced by stratifying the sample. To stratify the sample, every tenth post was included. This stratification count was double checked by a second coder to ensure the correct selection. Additionally, any post referencing or displaying an aspect of self-harm was included. This was done because the degree of harm of the pro-ana content on these websites is one of the guiding research questions for this study. This range of data inclusion ensured theory saturation.

Content themes for coding were largely based on those included in the Exploratory Study. New forms of self-harm were observed in the form of actual starvation and implied suicide. Additionally, due to the low occurrence of cigarette and tape measure objects, these objects were condensed into the category of “other” objects.



Further, due to the amount of occurrence, body size comparisons and before and after ana categories were combined. Additionally, a new theme of environmental triggers was observed (See new variable definitions below). Activity for all content was assessed after approximately three and six months (April 8<sup>th</sup>, 2013 & June 27<sup>th</sup>, 2013) to see if pages hosting this content had become inactive on the server.

*Main Variable Definitions (all coded as present or absent).*

Environmental triggers:

Christmas: Christmas meal triggering ana cycle.

Family: Family gathering triggering ana cycle.

## **The Second Phase**

Data for the second phase was searched on April 27<sup>th</sup> and 28<sup>th</sup> of 2013. For this phase, all pro-ana content found on Facebook and Pinterest, which met the outlined criteria for this study was analyzed. Due to the amount of pro-ana content found tagged as pro-ana on this search on Tumblr, this data set was reduced by stratifying the sample. To stratify the sample, every tenth post was included. This stratification count was double checked by a second coder to ensure the correct selection. Additionally, any post referencing or displaying an aspect of self-harm was included. This range of data inclusion ensured theory saturation.

Content themes for coding were largely based on those included in the Exploratory Study and Phase 1. Activity for all content was assessed after approximately

three days, one week, one month, three months and six months after initial data observation, to see if pages hosting this content had become inactive on the server.

*Main Variable Definitions (all coded as present or absent).*

Environmental triggers:

Spring: Spring meal triggering ana cycle.

Family: Family gathering triggering ana cycle.

Pro-Ana Community:

Pro-Ana Community Building: Seeking ana buddies; followers; celebrating increased acquiring of buddies and followers; supporting pro-ana community.

Deletion of account: discussion of former user name to identify within community & mention of account deletion or suspension.

Pro-Ana Guidance: Seeking/Providing Pro-ana advice; motivational or educational support for pro-ana activities.

The following discussion will examine each website, giving a descriptive analysis first, followed by a thematic analysis and finally a research question analysis.

## **Chapter 4**

### **Results**

“That voice that says you can’t do it is a lying slut ”

–Pro-Ana Community Poster

#### **Website 1**

##### *Descriptive Analysis: Search Results*

When searching in the Exploratory Phase on September 27, 2012 for the words “pro-ana,” 0 results were returned for pro-ana pages. Of the two pages that were returned, one was for an Egyptian non-profit organization and one page belonged to the anti pro-ana movement. However, the search bar had an automatic completion (ie “did you mean?”) for the words “pro-ana tips.” Additionally, at the bottom of the search results page was an option to search the web for a dozen different pro-ana search terms including “pro-ana diets” and “pro-ana images.” When the auto completion term “pro-ana tips” was utilized as a search option, two pages identified as pro-ana were returned. Through a link found on the second page, a third page was discovered. Followers of these pages ranged

from 16 to 587 and the languages of Spanish (1) and English (2) were observed. Content on these pages ranged from 11 to 209 pro-ana posts.

Pages were translated with the website-provided Google Translate tool. The main limitation of using this translation tool was that if the posts were grammatically incorrect, the translation was grammatically incorrect, which could lead to unclear inferences.

Activity on these pages was assessed approximate 6 months after initial data observation.

At this point, only 1 page remained active.

During Phase 1, searching on December 27, 2012 for the words “pro-ana” returned 24 pages. Additionally, at the bottom of the search results page was an option to search the web for a dozen different pro-ana search terms including “pro-ana tips” and “pro-ana websites.” Content on pages ranged from 0 to 122 posts. Languages observed in these pages were English (8), Spanish (7), German (3), Polish (2), French (2), Finnish (1), and Czech (1). Followers for these pages ranged from 1 to 467. Activity on these pages was assessed approximately 3 and 6 months after initial data observation. After 3 months, only 9 pages were still active and after 6 months only 4 were active.

During Phase 2, searching on April 27, 2013 for the words “pro-ana,” returned 25 pages, 4 of which were repeated from Phase 1. Content on pages ranged from 0 to 139 posts. Languages observed in these pages were English (9), French (5), Spanish (4), German (2), Polish (2), Arabic (1), Slovak (1) and Czech (1). Pages were translated with the website-provided Google Translate tool. Followers for these pages ranged from 0 to 231. Activity on these pages was assessed approximately three days, one week, one month, three months and six months after initial data observation. In terms of the time

frame for inactivity, one page was inactive after three days, zero additional pages were inactive after one week, nine additional pages were inactive after one month, ten additional pages were inactive after three months and two additional pages were inactive after six months. In total, 22 of the 25 pages became inactive during the observation period.

### *Descriptive Analysis: Characteristics of Content*

In terms of what was found in the pictorial posts overall in the Exploratory Phase, 260 pro-ana posts were found between the three pages. Most posts were user generated as opposed to media generated (206 vs. 54). Additionally, most pictures had a body central focus (146). Cutting, purging, smoking and restricting food intake were referenced or displayed types of self-harm behavior. Cutting pictures were unique to this website in the exploratory phase. Promotion of bulimia was present in cover photos and a cartoon picture where the female figure was vomiting into a toilet and butterflies were coming out of her mouth. Of the 78 object focused content, 46 were fashion focused. 'Tips and tricks' were observed on 2 of the pages. Such tips included drinking coffee and smoking cigarettes to stave off hunger, eating 'negative' calories foods, constantly chewing gum and looking at themselves naked in the mirror as the shocking lack of thinness seen in their reflection will motivate them not to eat.

In Phase 1, 291 pro-ana posts (out of 322) were found between the 24 pages. Again, most posts were user generated as opposed to media generated (214 vs. 77) and the most common central focus was the body (131). Starvation (14), purging, and

smoking were referenced or displayed types of self-harm behavior. Of the 122 object focused content, 98 were fashion focused. ‘Tips and tricks’ were observed on 7 of the pages. Such tips included making excuses such as “I just ate” to get out of eating and purging by pushing on the stomach or using a toothbrush. 3 pages did not have any pictures associated with them. Instead of offering thinspiration or community support on the page itself, these pages seemed to exist for the purpose of allowing pro-ana community members to find others in their community. For instance, one page proclaimed that it was a place for “Hard-Core ana’s” only and proclaimed that it was a place where people could “make new buddies.” Other types of posts observed on the individual home main pages of these small community pages included posts to external pro-ana websites, fitness tips, dietary intake report, and emotional support sayings.

In Phase 2, 336 pro-ana posts (out of 354) were found between the 25 pages. In line with the first two observations, most posts were user generated as opposed to media generated (253 vs. 83) and the most common central primary and secondary focus was the body (276). Self-harm was referenced in 28 of these posts taking the form of starvation, cutting, purging and suicide. Of the 207 object focused content, 129 were fashion focused. ‘Tips and tricks’ were only observed on 2 of the pages.

2 pages did not have any pictures associated with them. These pages allowed pro-ana community members to find community members and hosted links to external pro-ana blogs. The other pages were more active with types of posts on home main pages including links to external pro-ana websites, fitness tips, dietary intake report, and emotional support sayings. Popular photographic posts included the use of banner text

across a photo to induce motivation towards body weight goals. These photos included such text as “The voice that says you can’t do it is a lying slut” across the top of a photo displaying a thin female torso with a tape measure tied across the waist line in a bow. During the observation period, prominent media ideals included Miley Cyrus, Gwyneth Paltrow, Mary Kate Olsen, Nicole Richie, Demi Lovato, Lindsey Lohan, Hilary Duff, Kate Moss, the cast of the ABC Family network show ‘Pretty Little Liars’ and Nina Dobrev.

Page	Phase	Date Founded	Pro-Ana	User Content	Body Focus	Self-Harm	Fashion	Tips	In-active
1	E	4/4/2012	209	162	120	21	24	Yes	Yes
2	E	7/17/2012	11	7	5	0	6	No	Yes
3	E	1/2012	40	37	21	1	16	Yes	No
1	1	11/4/12	6	4	5	0	0	No	Yes
2	1	9/19/2012	3	2	2	1	1	No	Yes
3	1	8/25/2012	2	2	1	1	0	Yes	Yes
4	1	8/11/2012	0	0	0	0	0	No	Yes
5	1	2/22/2012	1	1	1	0	0	No	Yes
6	1	7/27/2012	97	56	30	2	44	No	Yes
7	1	11/7/2012	2	2	0	0	0	Yes	Yes
8	1	9/24/2012	4	4	1	2	0	No	No
9	1	5/19/2013	7	7	3	1	0	No	Yes
10	1	11/19/2013	0	0	0	0	0	No	Yes
11	1	8/25/2102	1	1	0	0	1	No	No
12	1	12/17/2012	16	14	10	3	1	Yes	Yes
13	1	12/20/2012	6	3	4	1	2	Yes	Yes
14	1	7/31/2012	17	15	11	3	4	No	Yes
15	1	11/1/2012	24	16	16	1	9	No	Yes
16	1	8/27/2012	49	41	21	2	21	Yes	Yes
17	1	3/17/2012	0	0	0	0	0	No	Yes
18	1	8/20//2012	28	24	11	0	10	Yes	Yes

Continued

Table 2. Website 1 Characteristics of Content.

Table 2. Continued

19	1	1/13/2012	3	4	0	0	2	No	Yes
20	1	8/18/2012	1	3	0	0	0	No	No
21	1	8/12/2013	3	4	0	0	2	No	No
22	1	11/29/2012	14	9	14	0	1	Yes	Yes
23	1	12/14/2012	3	2	0	0	0	No	Yes
24	1	---	4	4	1	0	0	No	Yes
1	2	4/8/2013	2	0	1	0	0	No	Yes
2	2	4/8/2013	0	0	0	0	1	No	Yes
3	2	2/20/2013	26	16	26	0	20	No	Yes
4	2	3/30/2013	6	6	5	1	4	No	Yes
5	2	5/29/2012	7	7	4	2	0	No	Yes
6	2	4/2/2013	6	2	6	2	2	No	Yes
7	2	3/27/2013	12	3	5	1	7	No	No
8	2	9/24/2012	4	4	1	2	0	No	No
9	2	11/1/2012	24	17	22	1	8	No	Yes
10	2	3/16/2013	17	15	11	1	6	No	Yes
11	2	1/1/2013	12	11	4	0	1	Yes	Yes
12	2	1/20/2013	0	0	0	0	0	No	No
13	2	1/19/2013	1	1	1	0	4	No	Yes
14	2	1/14/2013	7	7	5	0	7	No	Yes
15	2	3/16/2013	1	0	1	0	0	No	Yes
16	2	4/13/2013	1	0	1	0	1	No	Yes
17	2	8/25/2012	1	1	1	0	1	No	Yes
18	2	4/12/2013	20	16	16	2	4	No	Yes
19	2	Unavailable	1	0	1	0	0	No	Yes
20	2	4/16/2013	3	3	2	2	1	No	Yes
21	2	8/27/2012	127	102	120	7	52	No	Yes
22	2	8/20/2012	39	29	30	1	20	No	Yes
23	2	1/13/2013	4	4	4	0	2	No	Yes
24	2	3/22/2013	5	1	5	0	3	No	Yes
25	2	6/17/2012	10	8	5	6	4	Yes	Yes

*Descriptive Analysis: Beauty Ideal & Other Themes*

As can be seen from Table 3 below, the beauty ideal portrayed on these pages was consistent across the observation period in that the portrayal was Caucasian female



focused, portraying women under the age of 30 who were thin in appearance.

Additionally, most posts were focused on bodies and objects.

<b>Results</b>	<b>Female</b>	<b>Under 30</b>	<b>White</b>	<b>Thin Body</b>	<b>Body</b>	<b>Face</b>	<b>Object</b>
Website 1	801	750	795	703	557	102	407

Table 3. Website 1 Beauty Ideal & Content Focus.

Bone thinspiration pictures focusing on hip bones, shoulder blades, rib bones and collar bones were consistently observed during the observation period. Photos of concave stomachs and thigh gaps, or spacing in between the top of the thighs due to slender legs, were also present. When looking at bone and body area emphasis in the body central focus category, hip bones and the stomach were the most independently focused upon. The most common combination of body parts was stomach and thighs/thigh gaps. Where expressions were visible, neutral was the most common.

For objects, clothing was the most prominently focused upon followed by food and various other objects such as tape measures or cigarettes. One of the unique objects focused on was a red glass bead bracelet. The purpose of this bracelet in the community is to identify other members in the offline world. Several pictures also depicted girls with various objects tied over their mouths. Additionally, there was a photo album dedicated to high calorie desserts, which were labeled “forbidden for pro-ana.” Finally, 140 posts had a weight focus. The most prominent themes in this category were weight inadequacy, followed by before and after ana pictures. Exercise themed content was sparsely observed.

<b>Bone Emphasis</b>	Collar	Hip	Rib	Other	Combination
Website 1	43	114	59	33	162
<b>Body Emphasis</b>	Stomach	Legs	Thighs	Chest	Combination
Website 1	116	59	43	8	239
<b>Facial Expression</b>	Visible	Positive	Neutral	Negative	<i>Mouth Blocked</i>
Website 1	322	146	157	19	20
<b>Object Focus</b>	Food	Clothing	Other	Combination	
Website 1	24	261	65	11	

Table 4. Website 1 Other Themes

### *Interesting Aspects & Thematic Analysis*

Regarding the interesting aspects on these pages, some page administrators posted affirmation text such as “It’s almost past no-lunchtime” and “Christmas is coming. Don’t give up and don’t give in.” On Spanish written pages, community members were referred to as ‘princesses’. 10 tips for bulimia, such as purging immediately after eating because it is pointless to purge after one hour, were found. Additionally, one page was male focused instead of female focused. Finally, an attempt to sell a pro-ana diet book was noted on one of the pages.

A sense of personal agency was also observed. For example, one page posted the following quotation graphic “my life. my choices. my mistakes. my lessons. not your business.” The direct influence of the fashion industry was noted on one page whose cover graphic had nine, pencil thin, female fashion illustrations with the quotation “its not a diet. it’s a lifestyle,” in narrow lettering across the top. The page also endorsed Vogue, Cosmopolitan and Glamour magazines.

The subjugation of health in order to attain the ideal body was observed. For instance, in one set of community rules the expectation was that community members enjoy hating food and hunger. Additionally, a set of tips for dealing with hunger offered such guidance as, “Wear a rubberband around your arm. Snap it if you wish to eat.” Encouraging weight loss as a purification transformation and as a way to reach perfection. For instance, one page discussing the ideal body in the about statement written in Czech and translated, proclaimed “Our goal is to be the leanest .. Thinness = PERFECTION;).”

As the uniformity of the demographics in pictorial posts suggest, this community ascribes to a very narrow definition of beauty for women, which includes thinness as one of the foremost aspects. Thinness as an important aspect of community building was observed in the formation of community “about statements” as well. For example, an about statement written explained that the page was a place for those who want to be skinny and have that as their top goal and to not have to worry about being judged by other people. Finally, the admittance of pro-ana glorification was also observed on one page written in German.

### *Research Question Results*

In terms of the efficacy of the suppression attempt on website 1, a variety of pro-ana materials were found through the observation period. During the exploratory phase of the research, the content was found under “pro-ana tips” and under the keyword “pro-ana” for the next two phases. These public pages were relatively easy to access. Various

forms of self-harm were noted at each phase during the observation period in the forms of restriction of eating, smoking, cutting and purging was observed. At the six-month checkpoint, most of the initial content observed was inactive (44 out of 52 pages).

There were more similarities to pro-anorexia websites observed than differences. For example, community materials like “Ana’s creed,” “40 reasons to be thin,” and “The thin commandments.” An element of perceiving anorexic behaviors as a cleansing ritual for community members was observed in Ana’s creed; “I believe in salvation through starvation.” A similar sentiment was observed in the 40 reasons to be thin in the quote “Bones are clean and pure. Fat is dirty and hangs on your bones like a parasite.” Additional reasons to be thin observed in the 40 reasons to be thin was “Think of anorexia as your secret weapon,” “The models that everyone claims are beautiful, the spitting image of perfection, are any of them fat? NO,” and “Thin people look good in ANY kind of clothes.” In these claims, thinness is equated with beauty and perfection, in addition to the thin body being upheld as the ideal display, or “hanger,” for clothing. The thin commandments read with sentiments like “Being thin and not eating are signs of true will power and success,” and “You can never be too thin.”

Additionally, thinspiration was noted on nearly all of the pages observed (47 out of 52). Emotional and affirmational support was noted during the observation period. Finally, some page moderators seemed to use their pages as diaries and also provided links to other pro-ana blogs. The main difference observed was the sparse endorsement of anorexia as a lifestyle choice. The focuses of the pages were often vague, centering around becoming thin without identifying doing so through developing anorexia.

The ideal body was represented almost uniformly across all the pages observed. Most of the thinspirational images featured non-media figures who were Caucasian females, appearing to be under the age of 30 who were thin. Users of the pages appear more interested in seeing community members embodying the thin body ideal than the idealistic images themselves. The main difference observed between the pages was the degree of thinness and focus on bone pictures. Some observed pages idealized a more skeletal figure than others.

A fashion object emphasis was noted for 261 posts. Most of the clothing emphasis content was user generated instead of media generated. Clothing styles observed in these pictures ranged from body hugging or tight to body revealing. For example, tight tee shirts and dresses with waist line hugging silhouettes were frequently observed, as were loose tops, sweaters, short shorts, mini dresses, skirts, tight pants, leggings and bikinis. Also, frequently observed were leggings and various other forms of tight pants, which would emphasize the presence of a thigh gap. Additionally, one loose tee shirt with a skeleton outline printed on it was observed. The direct link between pro-anorexia and the fashion industry was observed in the picture with extremely thin fashion model illustrations standing under the text “It’s not a diet. It’s a Lifestyle.” This post reveals that the thin ideal upheld by the community and displayed by the user generated content disseminated within the community have their roots in the bodies of fashion industry models.

## **Website 2**

### *Descriptive Analysis: Search Results*

When searching in the Exploratory Phase on September 27, 2012 for the words “pro-ana” returned 12 pages. Each of these pages expressed anti pro-ana sentiments (“no pro-ana crap”). Health and working out were emphasized on 6 of the 12 pages. The unattainable beauty ideal was emphasized on 5 of the 12 pages. However, 3 of the 6 fitness pages displayed inspirational photos of unrealistically thin women. The women pictured had flat stomachs and sizeable gaps in between their thighs.

During Phase 1, searching on December 27, 2012 for the words “pro-ana” returned 7 pro-ana pages. Pages that appeared in the search, but were not pro-ana, included pages that were anti pro-ana and positive body image endorsing. Posts on pro-ana pages ranged from 2 to 145 and followers ranged from 8 to 65. Posts on these pages totaled 241, 216 were pro-ana. At the six-month checkpoint, all pages remained active.

During Phase 2, searching on December 27, 2012 for the words “pro-ana” returned 15 pro-ana pages, 7 of which were repeated from Phase 1 and 2 and were duplicates for this phase. Content on these boards ranged from 3 to 284 posts. Languages observed in these boards were English (14), and Italian (1). Followers for these pages ranged from 11 to 264. Activity on these pages was assessed approximately three days, one week, one month, three months and six months after initial data observation. In terms of the time frame for inactivity, all pages were still active three days, one week and one month after the initial observation. 2 pages were inactive after three months and an

additional three were inactive after six months. In total, only 5 of the 15 pages became inactive during the observation period.

### *Descriptive Analysis: Characteristics of Content*

In Phase 1, 216 pro-ana posts (out of 241) were found between the 7 pages. Again, most posts were user generated as opposed to media generated (161 vs. 55) and the most common central focus was the body (104). Self-harm in the form of starvation and smoking was observed in 5 of the posts. Of the 91 object focused content, 52 were fashion focused. No tips or tricks were observed on these pages but emotional and affirmational support was.

In Phase 2, 675 pro-ana posts (out of 696) were found between the 15 pages. Similar to the first two observations, most posts were user generated as opposed to media generated (526 vs. 149) and the most common central primary and secondary focus was the body (529). Self-harm was referenced in 10 of these posts taking the form of starvation, cutting and suicide. Of the 439 object focused content, 272 were fashion focused. No 'Tips and tricks' or links to other pro-ana blogs were observed on the pages. However, fitness tips and diet outlines were observed. Popular photographic posts included the use of banner text across a photo to induce motivation towards body weight goals. For example, one photo displayed the text "Next time you're about to lose control; 'Do you want hipbones or a pizza?'" over the female torso of a slender woman with protruding hip & rib bones and a sizable thigh gap between. During the observation period, celebrity or model media ideals were largely absent.

Page	Phase	# of Posts	User Content	Bone Focus	Body Focus	Self-Harm	Fashion	Tips	In-active
1	1	145	101	25	41	1	32	No	No
2	1	48	27	21	30	2	12	No	No
3	1	18	15	8	10	0	5	No	No
4	1	20	8	15	18	0	3	No	No
5	1	4	4	3	2	1	0	No	No
6	1	4	4	2	1	1	0	No	No
7	1	2	2	2	2	0	0	No	No
1	2	179	130	48	122	1	66	No	No
2	2	44	28	39	44	0	13	No	Yes
3	2	10	10	10	10	0	0	No	No
4	2	18	15	9	14	0	3	No	No
5	2	18	1	3	7	0	8	No	No
6	2	1	1	0	0	1	0	No	No
7	2	4	4	3	3	1	0	No	No
8	2	3	3	2	2	0	1	No	No
9	2	3	3	0	2	0	2	No	Yes
10	2	3	3	0	2	0	2	No	Yes
11	2	3	3	0	2	0	2	No	Yes
12	2	3	3	1	2	0	1	No	No
13	2	47	41	39	42	0	16	No	No
14	2	280	222	103	219	7	143	No	Yes
15	2	59	59	13	42	0	21	No	No

Table 5. Website 2 Characteristics of Content.

### *Descriptive Analysis: Beauty Ideal & Other Themes*

As can be seen from Table 6 below, the beauty ideal portrayed on these pages was consistent during the observation period and was Caucasian female focused, portraying women under the age of 30 who appeared to be thin. Additionally, most posts were focused on bodies and objects. These results are consistent with those observed from website 1.



<b>Results</b>	<b>Female</b>	<b>Under 30</b>	<b>White</b>	<b>Thin Body</b>	<b>Body</b>	<b>Face</b>	<b>Object</b>
Website 2	773	700	715	647	633	104	431

Table 6. Website 2 Beauty Ideal & Content Focus.

Bone thin inspiration pictures focusing on hip bones, shoulder blades, rib bones and collar bones were consistently observed during the observation period. However, a combination of these bones was most common. The most common combination of bones was hip and rib bones. Hip bones were most independently focused upon with one commentor revealing that they were beautiful. Pictures focusing on stomachs, thighs/thigh gaps and legs were observed. Again, a combination of the body parts was most common in terms of focus. The most common combinations for body part emphasis were stomach and thighs or thigh gaps or stomach and legs. Where expressions were visible, neutral was the most common.

For objects, clothing was the most prominently focused upon followed by various other objects such as tape measures or the pro-ana diet book. Finally, 165 posts had a weight focus. The most prominent themes in this category were weight inadequacy followed by before and after ana pictures. Exercise themed content played a larger role on website 2 with 93 posts displaying this theme.

<b>Bone Emphasis</b>	Collar	Hip	Rib	Other	Combination
Website 2	24	73	53	19	163
<b>Body Emphasis</b>	Stomach	Legs	Thighs	Chest	Combination
Website 2	113	51	49	13	325
<b>Facial Expression</b>	Visible	Positive	Neutral	Negative	<i>Mouth Blocked</i>
Website 2	329	123	157	49	8
<b>Object Focus</b>	Food	Clothing	Other	Combination	
Website 2	20	307	35	26	

Table 7. Website 2 Other Themes

### *Interesting Aspects & Thematic Analysis*

These pages hosted the most exercise themed content of all three websites, also known as “fitspiration.” These posts were centered around exercise regimes, motivation to begin exercise, bodies engaging in exercise and workout clothes, in addition to pictures of slender women. While these pages tended to push for the attainment of “health”, they tended to equate health with having a thin or slender, but toned, body in their pictorial inspiration. Criticism of this can be seen in the following comment made about a picture of a woman’s torso with protruding hip and rib bones with the words “don’t give up” across the top. The comment sarcastically revealed that the observer had previously seen this picture in the fitness category and it was prime motivation for her as she wanted to be so healthy inside that you could see her insides on her outside. This comment offers some insight into the lack of characteristic pro-ana content on this site. This community is not only surveyed by the website proper but by other users as well. Additionally, the influence of fashion on the need to look thin was noted. Under one picture of a thin woman wearing a loose black sweater and skinny jeans, one poster noted that she felt only skinny girls could do the outfits justice.

### *Research Question Results*

In terms of the efficacy of the suppression attempt on website 2, a variety of pro-ana materials were found through the observation period. During the Exploratory Phase of the research, no content was found under the keyword “pro-ana.” However 22 pages were found under the keyword “pro-ana” for the next two phases. These public pages were relatively easy to access. Noticeably low in prevalence were self-harm posts. Such posts were mainly in the form of starvation diet regimes. At the six-month checkpoint, most of the initial content observed had remained active (17 out of 22 pages).

Stereotypical materials typically seen on pro-ana websites, such as those observed on Website 1 (Ana’s creed, 40 reasons to be thin, thin commandments), were not observed on Website 2. Additionally, fitspiration and thinspiration were observed. A fashion emphasis was noted on many of the pages and posts. Affirmational support was present in several photos. Just as in website 1, anorexia was not endorsed in the observed pages as a lifestyle. In contrast to website 1, links to other pro-ana blogs were not observed. Additionally, self-harm posts were rarely observed. The pages tended to be fitspirational and exercise themed, thinspirational and clothing geared or a mixture between the two.

The ideal body was represented fairly uniformly across all the pages observed and was consistent with the ideal observed on website 1. Most of the thinspirational images featured non-media figures who were Caucasian females, appearing to be under the age of 30 who were thin. However, due to the prominence of exercise themed content, more

posts of the body in motion were observed. The prevalence of user generated content suggests users are more interested in seeing other users engaging in exercise and embodying the thin body ideal than the idealistic images themselves. The main difference observed between the pages was the degree of thinness and focus on bone pictures. Just as in website 1, some observed pages idealized a more skeletal figure than others.

A fashion object emphasis was noted for 307 posts. Most of the clothing emphasizing content was user generated instead of media generated. The most prominent styles of clothing were less body revealing than those observed on website 1. These styles included workout clothes, loose sweaters and loose tops. However, several bikinis were observed as well. Additionally, styles observed included cigarettes jeans and leggings.

### **Website 3**

#### *Descriptive Analysis: Search Results*

When searching in the Exploratory Phase on September 28<sup>th</sup>, 2012 for the words “pro-ana” returned 110 posts, one of which had to be excluded from analysis due to grammatical errors. During Phase 1, searching on December 27, 2012 for the words “pro-ana” returned 1000 posts. Of these posts, a stratified sample of every tenth post was selected, in addition to a sample of self-harm specific posts was analyzed. A self-harm post was excluded from the self-harm sample if it appeared in the initial stratified sample. A total of 199 posts by 166 posters were analyzed. The stratified sample was comprised of 102 posts and the self-harm sample consisted of 97 posts.

During Phase 2, searching on December 27, 2012 for the words “pro-ana” returned 1050 pro-ana posts. The sample size was then selectively reduced by stratified sampling to 105. Additionally, any post mentioning one of the nine observed areas of self-harm was included in the analysis (222). These analyzed posts came from 234 posters, some of who had posts in both samples. Most posts were written in English (217), but there were also German and Spanish posts. Followers for these posts ranged from zero to 359. Followers were more variable than on the other two websites, with the biggest increase from initial observation to peak number of followers being 5230. Activity of these posts was assessed approximately three days, one week, one month, three months and six months after initial data observation. In terms of the time frame for inactivity, 22 posts were inactive after three days, 30 additional posts were inactive after one week, 43 additional posts were inactive after one month, 71 additional posts were inactive after three months and 28 additional posts were inactive after six months. In total, 195 of the 328 posts became inactive during the observation period.

#### *Descriptive Analysis: Characteristics of Content*

In the Exploratory Phase, 85 pro-ana posts (out of 110) were found in this phase. 6 were unrelated to pro-ana and 18 were counter-movement posts. There were far more user generated content posts (74) than media generated (11). This is likely due to the sizeable amount of text tagged posts (35). 68 of these posts were inactive at the six-month checkpoint. Self-harm was visible in 17 of the posts taking the form of starvation, smoking, purging and cutting. The body was the most common central focus (30). Of the

18 object focused content posts, 8 were fashion focused. Only 4 tips and tricks were observed in the 110 posts.

During Phase 1 in the stratified sample, 96 posts were pro-ana, six were unrelated to pro-ana and two were counter-movement posts. 90 of the pro-ana posts were user generated; however, they were mainly text posts (61). The body was the most common central focus (17). Self-harm was visible in 26 of the posts encompassing the forms of starvation (18), smoking (1), cutting (2), purging (2) and suicide (1). Of the 15 object focused posts, 3 were fashion focused. No tips or tricks were observed in this sample.

In the self-harm sample, all 97 posts were forms of pro-anorexia and were user generated. 17 of the posts in the sample were pictorial/graphic and 80 were text. The most common central focus was objects (8) with 4 of these being fashion focused. The body was the second most frequent central focus (7). In terms of the self-harm portrayed in this sample, all five types were seen: starvation (51), smoking (3), cutting (6), purging (20), suicide (12) and more than one type of self-harm (5). Limited tips and tricks were observed (3).

During Phase 2 in the stratified sample, 98 of the total 105 posts were pro-ana posts. 95 of the pro-ana posts were user generated; however, they were mainly text posts (73). The body was the most common central primary and secondary focus (20). 23 posts displayed self-harm and 18 of these referenced starvation. Of the 16 object focused posts, 2 were fashion focused. Again, limited tips and tricks were observed (3).

In the self-harm sample, 216 of the total 222 posts were pro-ana posts. 216 of the pro-ana posts were user generated; however, they were mainly text posts (171). The body was the most common central primary and secondary focus (19). Starvation was the most common form of self-harm (145). Of the 37 object focused posts, 4 focused on fashion. No tips or tricks were observed in this sample.

Phase	Pro-Ana	# of Posters	User Content	Body Focus	Self-Harm	Fashion	Tips	In-active
E	85	73	74	30	16	8	4	68
1 Strat	96	93	91	15	26	3	0	50
1 Harm	97	94	97	7	97	4	3	49
2 Strat	98	90	95	19	0	2	3	45
2 Harm	216	170	216	21	216	4	0	46

Table 8. Website 3 Characteristics of Content.

#### *Descriptive Analysis: Beauty Ideal & Other Themes*

As can be seen from Table 9 below, the beauty ideal portrayed on these pages was consistent across the observation period in that the portrayal was Caucasian female focused, portraying women under the age of 30 who appeared to be thin. Additionally, most posts were focused on bodies and objects. These results are consistent with those observed from website 1 and website 2. There were no differences in beauty ideal between the stratified and self-harm samples.

<b>Results</b>	Female	Under 30	White	Thin Body	Body	Face	Object
Website 3	137	125	130	121	93	17	94

Table 9. Website 3 Beauty Ideal & Content Focus.

Bone thinspiration pictures focusing on hip bones, shoulder blades, rib bones and collar bones were observed. However, most content was in the form of text prose. When bone thinspiration was present, hip and rib bones were the most commonly focused upon. Pictures focusing on stomachs, thighs/thigh gaps and legs were observed. Again, a combination of the body parts was most common in terms of focus. The most common combinations for body part emphasis were stomach and thighs or thigh gaps or stomach and legs. Where expressions were visible, positive was the most common. For objects, clothing was the most prominently focused. Finally, several posts had a weight focus. The most prominent themes in this category were weight inadequacy (90).

#### *Interesting Aspects & Thematic Analysis*

The posts on this site revealed the most self-harmful content of all three websites and was the only website to host all forms of self-harm in an observation period. The most common type of self-harmful content observed was starvation. Most of this content revolved around food intake diaries and the posting of starvation diets. Also, pro-ana progress plans were outlined which incorporated diet and exercise regimes.

Self and community promotion was observed in several posts (ie “follow for follow”). Additionally, there were references to pro-ana community building and pro-ana guidance. Community members advertised for pro-ana buddies. The requests varied but most commonly, members requested people to talk to if they felt the urge to eat so that they would not. This is ironic in its similarity to the sponsored system used in many addiction recovery programs. Except, in this case, the “sponsor” would facilitate the



participant in continuing to be active in their addiction. Additionally, members sought advice, such as recommendations for the best diet pill or laxatives.

The subjugation of health in pursuit of the body ideal was also noted on website 3. For example, one post was a graphic with a mother and daughter next to each other on scales. The quotation placed on the side of the graphic read “Remember dear, your value as a woman is determined by your appearance. Now would be a good time to stop eating.” The poster’s response to this picture read “Right or wrong, it’s reality. This is our world. I WILL be skinny or I will fucking die trying. I welcome it.” In this post, the internalization of the sociocultural body ideal and the amount of worth one should derive from obtaining this ideal in their self-concept is present.

Anti pro-ana posters were mainly observed on website 3. These posts took the form of pictures of high calorie, triggering food, the use of sarcasm about the pro-ana community and the condemnation of the pro-ana community. Examples of high calorie, triggering foods included ice cream bars and Chinese food. The complication of the interpretation of these images when presented without text or captions is whether they came from an anti pro-ana poster or a pro-ana community posting food pictures to simulate the taste of foods which are not allowed to be eaten by communities (“food porn”). Additionally, condemnation of the pro-ana community can be seen in the following post “being pro-ana is almost like being a serial killer but causing more pain.” Overall, a more active community was observed on this website.

Several emotional themes were observed in the content, including perfection, control, distress, personal inadequacy and affirmation. One example of striving for

perfection was found in “Ana said my health should always come second when it comes to achieving perfection. And god help me—I profusely agree.” In this post, thinness is equated with perfection. Control over dietary intake was observed when one poster reported that they wanted to not have to think about not eating. Emotional distress was observed in “...This hole in my stomach, food never fills.” Emotional distress posts centered around lack of control and loneliness. Personal inadequacy, or dejection felt for failing to live up to pro-ana ideals, was observed in the following post: “I know that if I didn’t have a phobia of throwing up, then I would purge everything I ate. I feel like that should scare me more but it doesn’t; it makes me feel like a failure.” There was a variety of dietary intake plans posted, suggesting these posters sought affirmation for their plans from the wider community. These posts took the form of calories per day, types of foods eaten and specific caloric intake dietary plans which were intended to be followed. Finally, references to deletion of accounts, pro-ana community building and pro-ana guidance were noted.

### *Research Question Results*

In terms of the efficacy of the suppression attempt on website 3, a variety of pro-ana material was found through the observation period. During Phase 2 of the research, the content was found under the keyword “pro-ana.” These 328 posts were relatively easy to access. Various forms of self-harm were noted at each phase during the observation period in the forms of restriction of eating, smoking, cutting and purging was observed.

At the six-month checkpoint, most of the initial content observed was inactive (195 out of 328 posts).

Some similarities to pro-anorexia websites were observed. This site relied largely on prose instead of pictorial content. Self-harm was most prominent on this website. Pro-ana community guidance as support was also observed. Finally, several posters posted food intake diaries. When thinspiration was present, the ideal body was represented almost uniformly across all the posts observed. Most of the thinspirational images featured non-media figures who were Caucasian females, appearing to be under the age of 30 who were thin. Users of the pages appear more interested in seeing community members embodying the thin body ideal than the idealistic images themselves. A fashion object emphasis was noted for only 6 posts.

### **Overall Research Question Conclusions**

In terms of Research Question 1, openly accessible, member labeled pro-ana content was found on all three websites and aspects of self-harm were observed on each website. In terms of Research Question 2, chi-square analysis was preformed treating state of activity was treated as the dependent variable and selectively chosen variables as the independent variables. In the Exploratory Phase, user generated content ( $\chi^2(1, N = 345) = 6.242, p = .012$ ), clothing emphasizing content ( $\chi^2(1, N = 345) = 10.388, p = .001$ ) and implied purging content ( $\chi^2(1, N = 345) = 4.962, p = .026$ ) were found to be related to content no longer being active at the six-month checkpoint. In Phase 1, bone

focus media ( $\chi^2(5, N = 700) = 14.279, p = .014$ ), clothing focused media ( $\chi^2(1, N = 700) = 3.661, p = .056$ ), and active cutting focused media ( $\chi^2(1, N = 700) = 4.838, p = .028$ ) were found to be related to content no longer being active at the six-month checkpoint. In Phase 2, body part focused media ( $\chi^2(1, N = 1319) = 7.403, p = .007$ ) and clothing emphasizing media ( $\chi^2(1, N = 1319) = 9.594, p = .002$ ) were found to be related to content no longer being active at the six-month checkpoint. The amount of exercise focused content was found to be higher on still active boards ( $\chi^2(1, N = 1319) = 33.194, p = .000$ ).

Regarding Research Question 3, pro-ana pages on website 1 were heavily pictorial and thinspiration based, in addition to having tips and tricks, community guidelines, and a limited number of self-harm instances posted on them. Website 2 pages were mainly fitspiration based and largely absent of self-harm, tips and tricks and community guidelines. Website 3 posters sought more social support than posting images of thinspiration. This can be seen through the consistent larger proportion of text posts versus thinspirational posts.

There were several additional differences found among the communities on these sites. One of these differences was the focus on “bone” pictures. On website 2, they were relatively sparse. This was likely due to the focus on “fitspiration” which Urban Dictionary.com (2014) defines as “A healthier alternative to thinspiration, using examples of good fitness...as inspiration to attain a fitness goal.” Therefore, less protruding bones were focused upon, as this is an indication of an unhealthfully low

weight. Interestingly, the most common body modification focused upon, apart from body weight changes, were tattoos. The presence of tattoos on the photos circulated among the communities was noted during all of the observation periods.

Regarding Research Question 4, all websites relied more heavily on user generated content than media generated content. Although thinspirational images did portray celebrities and models occasionally, most pictures in the analyzed content were user generated. The ideal body portrayal was very similar among all three websites across the entire observation. Nearly all thinspirational posts displayed underweight or slender women. Due to the interests of this particular community, such a result is to be expected. However, the racial composition was almost entirely Caucasian in addition to nearly every thinspirational photo portraying a women appearing to be under the age of 30. These characteristics closely mimic the female beauty ideal portrayed in the media (See Wolf, 1991). However, most of the posts observed were user generated, especially in the form of “selfies” or pictures taken of a person, by the person, in which the camera is typically held at arms length and visible in the photo. This indicates a high degree of internalization of the media beauty ideal, to the point that the real idols of the community become those who are able to attain the media ideal body instead of the media ideal itself.

Inter-Coder Reliability, Exploratory Phase		Variable	Kappa
Variable	Cohen's Kappa		
<i>Pro-Ana Category</i>	.964	Collarbone	1.000
Pro-Ana	.963	Hip Bone	1.000
Not Pro-Ana	.941	Rib Bone	.954
Anti-Ana	1.000	Other Bone	1.000
<i>Source Category</i>	.925	<i>Body Focus: Body Areas</i>	.942
User Generated	.933	Thigh Gap	.989
Media Generated	.925	Legs	.953
<i>Type of Content Category</i>	.984	Stomach	.958
Photograph	.983	Chest	.910
Animation	.960	Other Body Area	1.000
Text	1.000	<i>Facial Expression Category</i>	.941
<i>Gender Category</i>	.993	Positive	.928
Female	.993	Negative	.914
Male	.856	Neutral	.902
Both Female and Male	1.000	<i>Objects Category</i>	.927
<i>Race Category</i>	1.000	Food Object	.957
Caucasian	1.000	Cigarettes	.765
Non-Caucasian	1.000	Tape Measure	.723
<i>Age Category</i>	.967	Clothing	.969
Under 30 Years Old	.966	<i>Self-Harm Category</i>	.972
Over 30 Years old	.700	Implied Smoking	.872
<i>Weight Category</i>	.990	Implied Cutting	.799
Thin	1.000	Implied Purging	1.000
Normal Weight	.866	Implied Starvation	1.000
Overweight	.972	Active Smoking	.831
<i>Central Focus Category</i>	.969	Active Cutting	.665
Body Focused	.949	Active Purging	1.000
Face/Head Focused	.988	<i>Weight-Focused Category</i>	.934
Object Focused	.956	Weight Inadequacy	1.000
<i>Body Focus: Bone Emphasis</i>	.982	Body Size Comparison	1.000
		Before and After Ana	1.000
		Rejection of 'Fat' Persons	1.000
		Exercise Coping	.888

Table 10. Inter-Coder Reliability, Cohen's Kappa, Exploratory Study.

Inter-Coder Reliability Overall, Phase 1			
Variable	K		
<i>Pro-Ana Category</i>	.777	Thigh Gap	.768
Pro-Ana	.797	Legs	.727
Not Pro-Ana	.813	Stomach	.854
Anti-Ana	1.000	Other	.795
<i>Source Category</i>	.799	Variable	K
User Generated	.810	<i>Facial Expression</i>	.859
Media Generated	.736	Positive	.876
<i>Type of Content Category</i>	.945	Negative	.759
Photograph	.922	Neutral	.819
Animation	.822	Object Blocking Mouth	.967
Text	.954	<i>Objects Category</i>	.764
<i>Gender Category</i>	.946	Food Object	.915
Female	.956	Clothing	.780
Male	.874	Banner Text	.800
Both Female and Male	.922	Other	.801
<i>Race Category</i>	.875	<i>Self-Harm Category</i>	.939
Caucasian	.887	Implied Starvation	.886
Non-Caucasian	.749	Implied Smoking	.767
<i>Age Category</i>	.891	Implied Cutting	.856
Under 30 Years Old	.914	Implied Purging	.925
Over 30 Years old	1.000	Implied Suicide	.907
<i>Weight Category</i>	.882	Active Starvation	.886
Thin	.913	Active Smoking	.767
Normal Weight	.773	Active Cutting	1.000
Over Weight	1.000	Active Purging	.856
<i>Central Focus Category</i>	.729	<i>Weight-Focused Category</i>	.785
Body Focused	.719	Weight Inadequacy	.689
Face/Head Focused	.767	Self-Deprecation	.736
Object Focused	.717	Before and After Ana	.815
<i>Body Focus: Bones</i>	.911	Rejection of 'Fat' Persons	.666
Collarbone	.715	Exercise Coping	.764
Hip Bone	.933	<i>Environmental Triggers</i>	.917
Rib Bone	.890	<i>Category</i>	
Other Bone	.820	Family	.899
<i>Body Focus: Body Areas</i>	.791	Christmas	.928
Chest	.769	<i>Pro-Ana Community</i>	.877
		Community Building	.852
		Deletion of Account	1.000
		Pro-Ana Guidance	.749

Table 11. Inter-Coder Reliability, Cohen's Kappa, Phase 1

Inter-Coder Reliability Overall, Phase 2		Variable	K
Variable	K	<i>Body Focus: Body Area</i>	.993
<i>Pro-Ana Category</i>	.876	Chest	.959
Pro-Ana	.890	Thigh Gap	.977
Not Pro-Ana	.852	Legs	.988
Anti-Ana	1.000	Stomach	.980
<i>Source Category</i>	.937	Other	.989
User Generated	.925	<i>Facial Expression</i>	.980
Media Generated	.941	Positive	.965
<i>Type of Content Category</i>	.858	Negative	.899
Photograph	.910	Neutral	.972
Animation	.721	Object Blocking Mouth	.956
Text	.917	<i>Objects Category</i>	.963
<i>Gender Category</i>	.919	Food Object	.955
Female	.926	Clothing	.977
Male	.799	Banner Text	.861
Both Female and Male	.947	Other	.939
<i>Race Category</i>	.875	<i>Self-Harm Category</i>	.990
Caucasian	.817	Implied Starvation	.990
Non-Caucasian	.799	Implied Smoking	.800
<i>Age Category</i>	.755	Implied Cutting	1.000
Under 30 Years Old	.761	Implied Purging	.896
Over 30 Years old	.762	Implied Suicide	1.000
<i>Weight Category</i>	.966	Active Starvation	.985
Thin	.959	Active Smoking	.874
Normal Weight	.890	Active Cutting	.952
Over Weight	.970	Active Purging	.979
<i>Central Focus Category</i>	.973	<i>Weight-Focused Category</i>	.978
Body Focused	.971	Weight Inadequacy	.954
Face/Head Focused	.986	Self-Deprecation	.930
Object Focused	.967	Before and After Ana	.984
<i>Secondary Focus Category</i>	.957	Rejection of 'Fat' Persons	.800
Body Focused	.948	Exercise Coping	.980
Face/Head Focused	.982	<i>Environmental Triggers</i>	.963
Object Focused	.948	Family	.941
<i>Body Focus: Bone Focus</i>	.984	Spring	1.000
Collarbones	.919	<i>Pro-Ana Community</i>	.926
Hip Bones	.988	Community Building	.982
Rib Bones	.990	Deletion of Account	1.000
Other Bone	.969	Pro-Ana Guidance	.804

Table 12. Inter-Coder Reliability, Cohen's Kappa, Phase 2



## **Chapter 5**

### **Discussion & Implications**

“There is little done to protect the rights of women over the size of 12 from being harassed for her size, or anything done to police morality and change society's view of thinness and beauty. Until this changes, we want our equal say about how to live with society's image of beauty that is forced upon us, and how we are attempting to attain that.” – Shade, 2003, p. 2, Pro-Ana community member

### **Overview of the Study**

The purpose of this research was to examine publicly accessible pro-anorexia content on three social media websites. This research was undertaken to answer a primary question, “Would the suppression attempt be successful in limiting pro-anorexia content on these three social media websites?” Secondary research questions included how the websites pro-anorexia communities on these three sites would differ from each other and pro-anorexia websites generally, how the ideal body would be portrayed through the thinspiration sections and what role fashion would play on these websites. Over the course of seven months, data was searched and observed on these three websites. The

keyword “pro-ana” was used to search for pages on these three sites during the seven-month observation period. Using inductive reasoning, an Exploratory Study was conducted. This study structured the remaining posts to data observation periods.

Data was analyzed by content analysis. To ensure the reliability of the data coding, two researchers independently coded all data and subsequently Cohen’s Kappa was assessed. If the Kappa level did not reach .7, the researchers met to discuss coding discrepancies until agreement was reached. There was within category mutual exclusion, with the possibility of the same post being coded into multiple categories. Data activity was assessed over time in order to ascertain when content would become inactive and if there would be differences in the type of content which became inactive. Data was also descriptively and thematically analyzed.

Results of this study reveal (1) the attempted suppression of pro-anorexia content on the examined social media websites has not been successful, (2) there are no consistent predictors of content becoming inactive, (3) there are subtle differences in the communities on each website and these sites shared many similarities with pro-anorexia websites generally, (4) the beauty ideal was portrayed mainly by community members and was consistently portrayed by thin or slender Caucasian women under the age of 30, (5) fashion and the need to look thin in clothing was observed on all websites.

### **Discussion of the Findings**

The following will look at each specific research question and discuss the findings from this study.

**RQ1: How effective have the user agreement guidelines been in suppressing harmful, pro-anorexia content on these websites?**

The pro-anorexia content suppression attempts appear, at this point in time, to be unsuccessful in keeping such content off of the studied websites. During the observation period, such content was located on each website. Website 1 did not return results under the keyword “pro-ana,” however the auto-complete search engine returned two results under “pro-ana tips” and an additional page was linked under these pages. In the next two phases, over 20 pages were found on each one. On website 2, the Exploratory Phase returned no pro-ana pages but the next two phases returned 7 and 15 pages respectively. Website 3 produced the most pro-anorexia results with over 1000 posts on both the 2<sup>nd</sup> and 3<sup>rd</sup> phases. The community appears most active on this site.

Various types of self-harm were observed on each website during the course of the observation period. Such types of self-harm included food restriction, cutting, purging, smoking and suicide. Only website 3 was found to host references to all of these types of self-harm. Website 1 posts referenced a variety of self-harm including restricted eating, cutting, purging and smoking. However, on website 2 such posts were largely in the form of restricted eating and were the least predominant in comparison to the other two websites. Interestingly, most of the ‘tips and tricks’ were observed on website 1. No references to ‘tips and tricks’ were observed on website 2 over the course of the

observation period. Though website 3 hosted the most personal self-harm references, ‘tips and tricks’ for others were largely absent from this website.

Both website 1 and website 2 content was heavily pictorial. However, the pro-ana content found on website 2 during the following two observational periods revealed less of a bone focus for bodies. This indicates the ideals used on website 1 were thinner than those on website 2. As fitpiration was a focus on many of the pro-ana labeled pages on website 2, this finding makes sense. Further, instances of self-harm were noticeably low on this site in comparison to the other two sites.

**RQ2: What characteristics of pro-anorexia content will prompt the contents’ inactivity from the studied websites? Will the different websites differ in their removal criteria?**

Over the three phases, content characteristics related to inactivity were variable. One consistent characteristic found to be related to inactivity was the content having a clothing focus. Surprisingly, self-harm failed to reveal consistent differences in terms of content becoming inactive. However, this could partially be attributed to the low prevalence of this type of content overall. When examining content characteristics by website, few differences were found in relation to content inactivity.

The lack of consistent differences in terms of what content remains active and what content becomes inactive suggests three possibilities for content becoming inactive (1) the website administrators are doing random searches for prohibited content and

removing them upon discovery, (2) other users of the websites report the content which results in its removal, and (3) the posters of the content remove it.

**RQ3: How will the pro-ana communities on the three websites differ from each other? How will these sites differ from pro-anorexia websites generally?**

The pro-anorexia content examined in this study was very similar to content previously studied on pro-anorexia websites in that thinspiration, religious overtones, social support, and personal progress postings were observed. Pro-anorexia pages on website 1 had a larger emphasis on “bone” pictures, while website 2 pages were heavy on fitspiration and exercise regimes. Website 3 posts were heavily text based, taking the form of pro-ana diaries and the seeking of pro-ana buddies. In terms of differences from pro-anorexia websites, drastically thin women and ‘tips and tricks’ for beginning and continuing anorexia were less prevalent. The endorsement of anorexia as a lifestyle choice was also notably less prevalent. Posters often revealed that these activities were what they were engaged in but not necessarily promoting them for other people. This is likely to be at least partially due to the suppression attempt.

**RQ4: How will the ideal body be portrayed on these websites through thinspiration sections? Will this ideal be disseminated using media figures or group members?**

The ideal body portrayal was essentially uniform across all three websites across the entire observation. Nearly all thinspirational posts displayed underweight or slender women. Due to the interests of this particular community, such a result is to be expected. However, the racial composition was almost entirely Caucasian, in addition to nearly every thinspirational photo portraying a woman appearing to be under the age of 30. These characteristics closely mimic the female beauty ideal portrayed in the media (See Wolf, 1991). However, most of the posts observed were user generated, especially in the form of “selfies” or pictures taken of a person, by the person, in which the camera is typically held at arms length and visible in the photo. This indicates a high degree of internalization of the media beauty ideal, to the point that the real idols of the community become those who are able to attain the media ideal body instead of the media ideal itself.

**RQ5: What role will fashion play on these sites? What type of clothing styles will be prominent on these sites?**

The need to look thin in clothing was observed on all websites but most heavily on website 1. This was particularly true in Phase 2 as one main page promoted pro-anorexia with a picture of fashion model illustrations. Additionally, the pro-anorexia “style” was discussed in that those who followed this page were expected to watch their weight and shape. Common clothing styles included sundresses, leggings and skinny leg jeans, short-shorts and bikinis. Such styles emphasized thigh gaps, legs and the stomach.

The four key findings from this study include (1) that the pro-anorexia community has maintained a presence on social media despite attempts to suppress it, (2) there are no clear or consistent differences in the type of content which becomes inactive on these websites, (3) the beauty ideal portrayed on these websites was essentially uniform, and (4) one of the pressures felt by the community in terms of needing to be thin for clothing is partially coming from the fashion industry.

## **Implications of the Study**

### *Content Availability and Inactivity*

Pro-anorexia content was able to be found during each phase of the observation. Although most of this content eventually did become inactive, this result indicates that the community suppression attempt has been unsuccessful. Interestingly, Pinterest was the only website to offer a disclaimer before showing any pro-ana content. Other websites could potentially investigate the efficacy of incorporating a disclaimer page in their sites. Then, when an individual searches for pro-anorexia content, they would be redirected to a disclaimer similar to what Pinterest uses, so that potential viewers are warned about the content they are about to view. Surprisingly, no clear or consistent differences were found in the types of content which became inactive, including the presence of self-harm.

With the increasing and casual use of social media, websites may find it hard to enforce their content policies for users, particularly for heavy users who are more likely to log on to these sites seeking social inclusion rather than information (Rauch & Schanz, 2013). These users are also more likely to superficially process messages they read and

more readily accept such messages (Rauch & Schanz, 2013). This makes the presence of objectionable content likely to persist on social media as some users may seek these mediums as an outlet to connect with others who share more radical viewpoints.

According to Jamieson (2009), Facebook has been reticent to heavily regulate the website. Facebook relies on other users to report offensive content and is mainly focused on content that breaks the law (Jamieson, 2009). Regarding objectionable content containing racism, there is little written about such comments on Pinterest; however one online article pointed out that in 2012, someone had registered an account under the username of “Obama” with a profile picture of a primate (Rivas, 2012). One Pinterest user responded to this article by saying that this was a clear violation of the website’s terms of service and that for Pinterest to remove such profiles, they must be reported to Pinterest. Tumblr’s users have turned to the Internet shaming those who post comments deemed racist. For example, one Tumblr page is dedicated to publishing comments deemed racist and linking these comments to the person’s personal information on Facebook, such as their profile picture and address (Eördögh, 2012). Even at Ohio State University, there exists such a policing group for OSU related comments that are deemed racist (Williams, 2012). All three of the websites appear to be heavily reliant on users to report offensive content within their spaces.

Sometimes offensive content does violate the law, particularly when it comes to the recent phenomenon of cyberbullying. Previous legal rulings have held that online harassment and incitement to commit suicide towards others constitutes “Lethal Advocacy,” and as such, is not free speech as protected by the first amendment (Simons,



2011). Cyberbullying often occurs on social media websites; however, websites are not held legally responsible for content their users post and such content is often protected by the first amendment (Bazon, 2010).

One such example is Rebecca Sedwick, who was cyberbullied on a number of social media platforms, including Facebook, over the course of a year (Alvarez, 2013). Eventually, she committed suicide (Alvarez, 2013). According to an article by Bazon (2010), the main remedy Facebook and other social media websites have is to take down offending content and warn the poster or delete their whole account. The reliance on users to police their own used space can be seen in Facebook's Chief Security Officer stating that it sometimes feels pointless to be proactive about offensive content as users report such content within minutes after it is launched (Bazon, 2010). This culture of user policy policing could account for the inconsistencies observed in which content became inactive during the observation period. Most of these pages had very few followers, indicating a low visibility on each page. For users to report offensive content, they must be exposed to it or actively seek it out.

### *Beauty, Fashion & the Community*

During all three observation periods on all three websites, the beauty ideal was disseminated through the use of thin or slender Caucasian women who appeared to be under the age of 30. Though the ideal was mainly disseminated with the use of user generated media, this ideal closely mirrored that promoted by the media. The main

differences were in the amount of emphasis placed on bones. Finally, the need to look thin for clothing and to possess/maintain a fashionably thin body was noted.

In Western societies, women are pressured, if not expected, to approximate the beauty ideal disseminated by the media. The emphasis on thinness, coupled with the tendency to objectify women's bodies, leads to the internalization of this objectification. The impossibility of approximating the media ideal leads to appearance dissatisfaction and the subjugation of concern for one's health to the quest for the 'perfect' appearance. While this is true on a wide scale for many women in Western society, the existence of the pro-anorexia community and their quest for the perfect appearance is a symptom of a much deeper societal problem.

The importance of the type of clothing promoted and worn by women in Western society should not be overlooked. Tiggemann & Lacey (2009) identified fashionability as one of the main reasons that women wear clothing. Prichard & Tiggemann (2005) found that aerobic participants exercised for appearance purposes and scored higher on body dissatisfaction, disordered eating and self-objectification than aerobic instructors. Additionally, higher levels of self-objectification were associated with wearing tighter exercise clothing (Prichard & Tiggemann, 2005). Clothing can also be used to avoid negative body image affect. Trautmann, Worthy & Lokken (2007), found that women who were more dissatisfied with their bodies reported greater disordered eating behaviors and were more likely to wear clothing to camouflage their bodies, avoid revealing, form-fitting or brightly colored clothing and avoid shopping for clothing. This research

suggests that women respond to two distinct ways to alleviate body dissatisfaction through clothing choice, camouflaging and self-exhibitionism.

This study demonstrates that young women, particularly in this community, have detached themselves from the functionality and health of their bodies in the pursuit of the aesthetic body ideal. Several of the reasons for this have been mentioned by the community, from the need to look thin in clothing to the need to attract male partners but one perception permeates all these reasons, that the potential gains from engaging in this “lifestyle” to attain the ideal body outweighs the risks. This perspective is intricately tied to the objectification of women. As women internalize this objectification, they begin to view their bodies as objects, which may result in the subjugation of a person’s health in order to meet a societal aesthetic ideal. Through social comparisons to media ideal figures, women are taught this ideal. As media exposure increases, these comparisons permeate women’s daily lives. This exposure makes the thin ideal hard to escape, particularly for young women who have less developed self-concepts.

Such an atmosphere of dissatisfaction can be immensely profitable for a variety of industries. For example, the diet and weight loss industry earned over 60 billion dollars in revenue in 2011 (Axtell, 2012). This is despite less than promising long-term results from dieting, particularly for those who approach a diet from a self-rejecting perspective (Axtell, 2012). Revenue in the global beauty care industry is forecasted to reach 265 billion dollars by 2017 (Wood, 2012). Finally, the number of cosmetics surgeries performed is increasing in addition to having such procedures offered as “add-ons” when

patients go to their physicians for an unrelated medical issue (O'Donnell & Berman, 2010).

With the opportunities to improve appearance surrounding women in our looks-centric society, women may begin to believe that the body is endlessly malleable and as such self-objectify their own bodies. When they are unable to make their bodies approximate the impossible ideal presented to them, they may engage in unhealthy behaviors in order to try to obtain the ideal. As young women suffer the most from exposure to idealized media, potential interventions could be targeted to them.

Additionally, the existence of this community and the emphasis on user generated media within it may be a function of certain characteristics of the Millennial Generation. For example, individualism and narcissism has been shown to be higher in the current generation when compared to previous generations (Twenge, 2013). This extreme focus on the self may create a gap between self-expectations and reality, which could detrimentally impact mental health (Park, Twenge & Greenfeild, 2014). The traits may help explain the proportion of user generated content in this community.

One potential intervention could be aimed at increasing media literacy. There are several contributing factors to the prominence of the current beauty ideal, which could be potentially used for an educational intervention. First, the impossibility of the beauty ideal could be discussed. Few women possess the thin idealized body naturally. Additionally, the use of image enhancing software, is pervasive in media images. With this software, women's bodies can be digitally slenderized. Calling attention to this fact may help to decrease body dissatisfaction.

Another potential educational intervention could be aimed at decreasing participants' detachment from the functionality of their bodies. Such an intervention could discuss the long-term health consequences of some of the behaviors typically associated with trying to obtain the ideal body, such as extreme dieting. In such an intervention, former and current anorexia sufferers could be brought in to speak to the audience.

### **Limitations of the Study**

The main limitation of this study lies in its observational nature. In this observation, participants were not contacted and as such important issues such as why posts were posted, what posts represent to individuals and how active posters are in the pro-ana community remain unresolved. What was observed in this study was largely manifest content. When latent content was observed and inferences were made, the accuracy of these inferences in terms of the posters own views is somewhat unclear.

Additionally, as this project only analyzed publicly available content, the types of activity which would go on in private website areas is unknown. This limitation is acceptable because analyzing the publicly available content, content to which the general public has access, was the goal of this research. Finally, there is a possibility of posters misrepresenting themselves online with personas they do not ascribe to in real life.

## **Suggestions for Future Research**

As much of the research on the pro-anorexic community has been done qualitatively, the next step in pro-anorexia research is to survey members of the community. The differences between the general anorexic community and the pro-anorexic community are not fully known. For instance, it is likely that there are differences in the interpretation of the sociocultural environment, types and prominence of social comparisons, in addition to self-concept differences. However, due to the observational nature of this research, such differences were unable to be investigated. Therefore, future quantitative research could investigate these issues, in addition to examining such variables as thin ideal internalization, general media usage, fat phobia and disordered eating habits.

In this research, the variation to which community members ascribed to and the promoted pro-anorexia lifestyle varied. Future research could investigate the degree and duration of involvement within the community and the subsequent impact of this involvement could be investigated. To this point, surveying the actual community is an important next step in the research of this community.

Future research could also investigate a variety of intervention strategies, such as the efficacy of adding a disclaimer at the top of the main search page after entering pro-anorexia community keywords into social media website search engines. Pinterest offers such a disclaimer as a header to search results for such searches, but the effectiveness of the disclaimer in deterring searchers from clicking forward is unknown. However, based on evidence by Martijn et. al. (2009) in which a cover page appeared that participants had

to click through, this may be an effective strategy to deter searcher exposure to pro-anorexia community material. Further, a redirect page could be added where those who type one of the community key terms into the website search engine are redirected to a website like the National Eating Disorders Website.

## **Conclusions**

Though it may be tempting to demonize the pro-anorexia community, demand bans of such websites and the repression of this community on social media, the emergence of this community is a symptom of a much larger societal issue. As illustrated in the opening section quotation, the pro-anorexia community is extremely susceptible to the thin beauty ideal that is pervasive in society and this community is aware of the less preferential treatment that women who do not fit this ideal are subjected to in society. Until the sociocultural environment provides a broader definition of beauty as a standard of beauty, we are likely to see the pro-anorexia community maintain its presence online regardless of the restrictions placed upon the community, or how the community is perceived by outsiders.

The media and the fashion industry could be instrumental in such a change. The media, by incorporating more diversity in the beauty ideals that they present to the public, could foster a sociocultural atmosphere of body positivity instead of scrutiny. One potential way for the media to promote a more body positive environment is to label digitally enhanced images as having been altered. There is evidence that such labeling positively impacts body satisfaction (See Slater et. al. 2012). The fashion industry could

begin to regularly use more diverse models and cater to the needs of plus-sized consumers, as they have always done for 'straight' size consumers. By enacting these changes, the media and fashion industry may be able to reduce the body dissatisfaction so prevalent for women in Western societies and potentially curb the increasing rates of eating disorders.



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