

Pin It for Yourself: Women's Health and Fitness Content on Pinterest

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Abstract

The current study examined content and images in Pinterest's *Health & Fitness* category. Unlike women's magazines, Pinterest content has no editors deciding what content appears; instead, users generate and share content directly with other users. Findings indicated that Pinterest users more frequently see models with more realistic body types, as opposed to the ultra-thin models presented by traditional women's magazines. Thin models received

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fewer repins and likes, indicating negative feedback from users on excessively thin models in exercise and health content. Additionally, the majority of content focused on exercise, with a lesser emphasis on recipes and general health. Pinterest may represent a space for women, controlled by women.

Pinterest, a social media network which allows users to collect, categorize, and save images, links, and information, caters to a strongly female demographic (Duggan & Smith, 2013; Otoni et al., 2013; Tekobbe, 2013), and has become one of the fastest-growing social networks in recent years. Pinterest is sorted into different categories such as *Women's Fashion, Food & Drink, Hair & Beauty*, and *Health & Fitness*. Of particular interest is the *Health & Fitness* category, which features content on diet and exercise, and often features pictures of fit, athletic women and instructions on how to “get a better body.” Women all over the world peruse this content every day, and pin these images and instructions for their own use.

What separates Pinterest content from traditional women's health and fitness content—such as content that appears in magazines—is that there is no gatekeeper or editor selecting content that appears on Pinterest. Female users themselves pin the content that other users see when they look at health and fitness information. Thus, Pinterest's *Health & Fitness* content represents to an individual user what other women see as a social norm: how women should look, how they should dress, and what means they should take in order to achieve the ideal

healthy, fit lifestyle (see Bergstrom & Neighbors, 2006; Cusumano & Thompson, 1997).

The Theory of Planned Behavior deals with which outside influences will predict a person's actions and behavior (see Ajzen, 1988; Ajzen 1991). This theory has been particularly useful in predicting health-related behaviors (see Godin & Kok, 1996), and states that subjective norms (or social pressures) play an important role in determining how people will act in regard to their health. Using this theory, the current study investigates whether the content within Pinterest's *Health & Fitness* category should not only reflect which social norms women will find acceptable, but also predict how they will act, and which actions they will take in regards to their health and fitness.

The current study employed a content analysis which examined messages within the *Health & Fitness* category on Pinterest. Content was analyzed for the type of pin—whether it is recipes and diet tips, exercise instructions, or cures for the common cold—as well as the appearance of the women who were featured in the photographs accompanying the pins. This was done in order to discover what social influences help women make decisions about their health, as well as which social norms they are being exposed to. Pinterest represents a space that women not only use, but control and define. Therefore, the images and content on Pinterest may embody a shift in how women consume health and fitness content.

Literature Review

Pinterest and *Health & Fitness*

Pinterest, a social media platform created in 2010 (Zarro & Hall, 2012), caters to a largely female user base

(Duggan & Smith, 2013; Ottoni et al., 2013; Tekobbe, 2013)—and has been heralded as a space for women to generate content, and organize their online experience. It is said that “the main idea of [Pinterest] is to collect and share things users find interesting in an organized and categorized way” (Ottoni et al., 2013, p. 2). The basic unit of content on Pinterest is a pin, which generally consists of a photograph or illustration—which may or may not contain words and descriptions—as well as a caption that users can edit and change. Each pin generally links to outside content, such as another website or YouTube video. Within Pinterest, “pin” is not only a noun that refers to individual items of content, but a verb that describes the act of a user saving a pin for individual use at a later time. Boards are a user’s way of categorizing the pins that she collects; a board is a folder or collection of pins that is generally sorted by topic. An individual user may have a board for fashion, a board for recipes, and another board for health and fitness. Pinterest itself provides predetermined categories for every board and pin to fall into—categories range from *Food & Drink* to *Gardening* and *Women’s Fashion*. Of interest to the present research is the category labeled as *Health & Fitness*.

When users log in to Pinterest, they can begin by scrolling through their friends’ recent pins or by selecting a specific category to view. On any given day that users scroll through the *Health & Fitness* category, they are bombarded by a variety of images, ranging from healthy recipes and foods designed to be eaten after a workout, to exercise instructions purported to tighten abs and yoga poses for stronger arms. There are also health topics present, such as the best cures for the common cold and

herbal teas meant to soothe headaches. *Health & Fitness* pins are often accompanied by a picture of a fit, muscular woman, encouraging the user to do a set of exercises or act a certain way in order to be like the individual seen in the pinned photograph. One of the primary components and focuses of Pinterest is its visual elements (Ottoni et al., 2013), as each pin is accompanied by a picture or photograph.

While searching through Pinterest, regardless of the category, a user can pin (or save) an individual pin (an item of content) to her own personal boards. Users always have access to their boards for perusal at a later time. Each individual user may have a few or even dozens of boards that she has created and added pins to. Boards generally fall under the same categories that Pinterest provides for users; a user must define which category his/her board falls into before pinning can begin. Thus, content that appears when a user chooses to look at a specific category comes from the boards of other users, and is defined and categorized by the person who has created the pin. Within the *Health & Fitness* category, every pin has been chosen by a user not only for individual use but for the future use of others. Unlike some other social networks which rely on user updates and real-world friendships for content, “on Pinterest the focus is on making connections with people who have similar interests and who share similar content” (Wilkinson, 2013, p. 3).

Women as Pinterest Users

Unlike other websites and forms of media, “Pinterest is particularly interesting as a social media platform because of its popularity with female us-

ers” (Wilkinson, 2013, p. 1). While the academic literature on Pinterest is in its infancy, there have been several studies which have demonstrated that Pinterest is a female-driven social media platform. Not only do women make up the majority of Pinterest users, but female users are more likely to like and repin the content of others; women “are more active in terms of content generation” (Ottoni et al., 2013, p. 8) and are more likely to pin items that can be purchased (Ottoni et al., 2013).

Because all of the content on Pinterest is user-generated, and the vast majority of Pinterest users are female, it can be assumed that content under the *Health & Fitness* category is created by women, for women, without the gatekeeping mechanism that takes place with traditional media outlets, such as women’s health and fitness magazines. There is no editor picking and choosing stories and images, rather it is female users themselves who are pinning and repinning content for other female users to view. This should result in a more varied interpretation of health and fitness than is presented in traditional women’s media content. Women may be more likely to pin images and instructions that are relatable and understandable, rather than the unachievable, glamorous, ultra-thin models who are present in women’s magazines (see Willis & Knobloch-Westerwick, 2013).

Women’s Health and Fitness Content and Body Image

Body image is defined as “a person’s perceptions, thoughts, and feelings about his or her body” (Grogan, 1999, p. 1), and has been the topic for a multitude of studies both in the realm of health, as well as communication

and media. As a predecessor of online content and a primary source of norms about appearance, many studies have analyzed the content of women's magazines (see Aubrey, 2010; Spyek, Grey, & Ahrens, 2004; Wasylikiw, Emms, Meuse, & Poirier, 2009; Willis & Knobloch-Westerwick, 2013) in order to determine the scope of content, the purpose of content, and the appearance of models featured in the magazines. As more and more women move their media consumption habits online, it is important to understand which images and content women themselves are selecting, rather than which content is being fed to them through gatekeepers and magazine editors. This means that Pinterest's content is relatively representative of what women think will make them healthy and fit, and what type of women they aspire to be like.

The majority of research on women's body image agrees that "body dissatisfaction is very common among females in western societies and often associated with weight loss behaviors, even in individuals who are not overweight" (Nejad, Wertheim, & Greenwood, 2005, p. 63; see also Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). This is a reflection of the images that women are exposed to in health and fitness content, which often features thin women, and focuses on appearance rather than health (Willis & Knobloch-Westerwick, 2013). Body dissatisfaction tends to be projected onto specific parts of the female body, as "women tend to be especially dissatisfied with their hips, thighs and stomachs" (Bergstrom & Neighbors, 2006, p. 977).

Theory of Planned Behavior

The Theory of Planned Behavior (Ajzen, 1988)—

which is rooted in psychology and relates to the factors that will predict how a person behaves—identifies three different predictors of which actions an individual will take regarding his/her health: “attitude, subjective norm, and perceived behavioral control” (Nejad et al., 2005, p. 64; Ajzen 1985; Ajzen 1988). These predictors are influenced by “behavioral, normative, and control beliefs” (Pawlak et al., 2008, p. 60). The Theory of Planned Behavior (TPB) has been repeatedly shown to be useful and acceptable for predicting the adoption of behaviors (Ajzen, 2002), and specifically health behaviors (see Godin & Kok, 1996). The TPB was “able to predict a sizeable percentage of the variance in the *intention to diet* and *to fast* and *follow-up dieting* and *fasting* behavior, indicating that it is appropriate to use these social cognition models” (Nejad et al., 2005, p. 73, emphasis in original) when one is attempting to predict how variables in the TPB predict health behaviors. Of particular relevance to the current study is the concept of subjective norms:

Subjective norms are defined as social pressures to perform or not perform a behavior. They are thought to be driven by normative beliefs, beliefs about how significant others would like an individual to act with regard to a particular behavior, and by outcome evaluations, the value the individual places on those normative beliefs. (Pawlak et al., 2008, p. 60)

Under these assumptions, a woman who is seeking health and fitness information on Pinterest likely values the opinions and norms of the other users, and is likely to adopt the behaviors and actions prescribed by the content they choose to consume. The information and content that ap-

pears under Pinterest's *Health & Fitness* category determines which beliefs and social norms a female user will adhere to. These images define what is normal not only in terms of appearance and fitness, but the means to which it is necessary to adhere in order to achieve the looks that they see on Pinterest. In regard to normative beliefs, "in the case of body image, a woman might believe that others would find her attractive or would approve if she were very thin. As a result of this belief, she may infer that others think she should do what it takes to achieve that desired or approved state" (Bergstrom & Neighbors, 2006, p. 982).

Concerns about weight and appearance are especially strong among women (Grogan, 1999; Nejad et al., 2005) who make up the majority of users on Pinterest (Ottoni et al., 2013). If a woman is constantly exposed to images of other women who are thin and fit, "a woman might believe that others have favorable attitudes toward thinness, so she infers that others think that she should perform behaviors that would achieve that goal" (Bergstrom & Neighbors, 2006, p. 982). The TPB predicts that "subjective norms, along with personal attitudes and perceived behavioral control, can influence behavior by changing one's intention to perform the behavior. Much research has shown that these models can significantly predict a wide variety of health-related behaviors" (Bergstrom & Neighbors, 2006, p. 983) once individual differences and other individual-level factors are taken into account. Because women are particularly susceptible to the pressures of social norms surrounding appearance and fitness, they may be more likely to be influenced by perceived social norms.

Research Questions

Because women use the images and content they see to form ideas about subjective norms (Ajzen 1988; Ajzen, 1991), it is important to understand what kind of content women are being exposed to on Pinterest's *Health & Fitness* category. These subjective norms play a role in the health behavior of users (Godin & Kok, 1996), which may be amplified in the case of Pinterest, where women are aware that the content they are seeing does not come from a gatekeeper or editor, but rather from other women who are also interested in health and fitness information. Therefore, the following research questions are proposed:

RQ1: What is the proportion of recipes, exercise content, health content, purchasable content, and inspirational content in Pinterest's *Health & Fitness* category?

RQ2: Which types of content in Pinterest's *Health & Fitness* category receive the most repins and the most likes?

In addition to understanding the actual content and interaction that occurs on Pinterest, the literature should address the appearance of the models who are featured in *Health & Fitness* content. Models in women's health and fitness magazines have traditionally been thin and appear in little clothing (see Malkin, Wornian, & Chrisler, 1999). The following research questions address the appearance of models on Pinterest:

RQ3a: What is the thinness of models featured in Pinterest's *Health & Fitness* category?

RQ3b: What is the muscularity of models featured in Pinterest's *Health & Fitness* category?

RQ4a: Is there a relationship between thinness and likes or repins?

RQ4b: Is there a relationship between muscularity and likes or repins?

Similarly, specific body parts may be scrutinized more strictly and frequently by women (see Bergstrom & Neighbors, 2006), including stomachs. The following re-search questions are proposed:

RQ5a: How frequently are the stomachs visible on models that are featured in Pinterest's *Health & Fitness* category?

RQ5b: How frequently is a closeup of a specific body part shown on models that are featured in Pinterest's *Health & Fitness* category?

Method

The current study employed a content analysis in order to better understand which types of images women are being exposed to in Pinterest's *Health and Fitness* category. The purpose of the study was to analyze the representations of women's bodies in the photographs present on Pinterest, as well as to better understand the types of pins present. All content on Pinterest is generated by users, and each pin features a photograph that can be viewed and repinned by users. The unit of analysis in this study was an individual pin that was present in Pinterest's *Health & Fitness* category. Analysis was completed based on the title and description of the pin, as well as the picture associated with the pin.

Sampling

Because Pinterest presents a different, varied, and unstructured selection of pins to each user on each different time a user searches *Health & Fitness*, sampling was conducted based on the assortment of pins that was presented to the coders during pre-arranged times. There are no time-stamps on Pinterest's content, meaning that cod-

ers relied on the pins that were first presented to them at the time that they began coding. Pins are generated for the *Health & Fitness* category from both new and old pins; users pin content to boards, for which they provide their own category. This means that if a user has a board that he/she categorized as *Health & Fitness*, anything added to that board may appear on the *Health & Fitness* category search feed at any time.

The sample for this study was selected from the *Health & Fitness* category search feed that users would see if they clicked on *Health & Fitness* while using Pinterest. Coders were instructed to code the first pins that they saw, starting at the top left and continuing until they had reached 100 pins. They were instructed to do this over the course of four days at predetermined times of the day. There were four different times slots available that were assigned to each of the two coders using a random number generator, so that on each of the four days, each coder viewed pins at a different time, and the various times of the day were represented in the sample. For example, on a Monday, one coder may have been assigned to code at 10 a.m., while the other coder was assigned to code at 2 p.m. This method controlled for different days and times that pins may appear in the *Health & Fitness* category. The four different days and four different time slots assigned to two different coders resulted in 800 pins selected for analysis, as well as 153 pins that both coders analyzed as part of a test of intercoder reliability, resulting in a sample of 953 pins.

Coding Categories

The primary coding category was the type of pin,

which was broken down into five sub-categories: recipes, exercise, health, purchasable, and inspirational. Pins that fell into the first sub-category, recipes, could be classified as either recipes for health, recipes for exercise, or recipes for weight-loss. Each of these categories was nominal and mutually exclusive. Recipes for health were pins that featured a food or recipe that was intended for health purposes, such as a healthy vegetarian recipe, healthy mid-afternoon snacks, or general healthy food choices. An example of this was a pin titled “Nine green smoothie recipes you’ll actually enjoy drinking” (2015). Recipes for exercise were pins that were designed to showcase foods that should be eaten in tandem with a workout, such as pins with the description “Quick post-workout snacks under 150 calories” (2015). Recipes for weight-loss featured pins that focused on how to use a diet to lose weight, and made no reference to exercise. This included recipes that stated the number of calories present in the food, or general weight-loss instructions for food, such as “The best foods for weight loss” (2015).

The second sub-category was exercise, which featured four different coding options: exercise instructions, tone or fix a specific body part, stretching/flexibility and yoga poses, and challenges. Exercise instructions were pins that combined different specific exercises to create a comprehensive set of workout instructions, such as “Late-night workout” (2015) which instructed users to do a combination of 20 knee-highs, 20 push-ups, 50 crunches, and several other exercises. Pins defined as toning or fixing a specific body part gave instructions related to a specific body part, such as the “Ultimate ab workout” (2015). Pins defined as stretching/flexibility and yoga poses gave users

instructions on how to increase flexibility or do a specific yoga pose, such as “Go splits! Nine stretches to get you there” (2015). The final specific category was challenges, which prescribed users with a set challenge or list of activities that they should participate in for a specific time. This included pins such as “Fitness Friday: 30 day ab and squat challenge” (2015).

The third sub-category was health, which featured pins defined as general health, exercise for health, or diet for health. This sub-category was designed to address pins that focused on health topics that were different from diet or exercise, or used diet and exercise as a means to achieve health rather than fitness or appearance. General health pins could discuss anxiety cures, vaccines, detoxes, or bath scrubs intended to improve health, such as “Natural psoriasis soap” (2015). Exercise for health pins were pins that focused on health, and used exercise as a means to achieve better health, such as “Relieve colds and congestion with yoga” (2015); these pins should not focus on exercise that relates to appearance or fitness. Pins defined as diet for health could feature topics such as organic foods that cured health problems, foods for diabetics, or herbal teas for health, such as “Bloated? Hungover? Dull skin? We’ve got the smoothie to cure you” (2015). These pins should focus on diet as related to health rather than a specific diet or food related to weight-loss.

The fourth sub-category was purchasable items, which featured items that a user could purchase directly. These pins could be either clothing, exercise equipment, or apps. Clothing pins featured exercise clothing or other clothing that was able to be purchased, such as “Design your own yoga tees and tanks” (2015). Equipment pins

were purchasable items that were related to health and fitness, such as “Five functional bike helmets made just for women” (2015). App pins should feature an app designed to track food intake or exercise, or other health and fitness related apps, such as “How to use MyFitnessPal” (2015).

The fifth and final sub-category featured pins deemed inspirational. These were quotes with inspirational meanings, such as “Stop competing with others and start competing with yourself” (2015). Additionally, inspirational pins may simply feature a picture of a woman or a specific body part that the users aspires to with a simple caption such as “This is what I want to be.” Inspirational pins may also be before-and-after photos of people in order to show the outcomes of healthy diet and exercise. Finally, pins could be coded as “other or miscategorized,” which was saved for pins that did not readily fall into any of the above described categories, or were not related to health and fitness.

Only pins that contained photographs of female models were analyzed for the following variables: determined whether the picture accompanying the pin featured a close-up photograph of a body part—one where a single body part was the only thing present in the photograph (yes or no), and whether the stomach of the model in the picture was visible (yes or no). During the creation of coding categories, it was noted that many of the pins in the *Health & Fitness* category featured models with their stomachs visible, denoting the emphasis on this particular body part as an indicator of thinness and attractiveness. Because women do not generally expose their stomach in daily life, it was of interest to researchers whether models were displaying their stomachs on Pinterest. Number of

repins and number of likes were also coded for each pin. Repins and likes are reported on each individual pin without interpretation needed.

In order to assess the appearance of the female models in the pictures, model attire, thinness, and muscularity were also coded. Model attire was coded into one of 10 categories: bathing suit, tight workout attire (two piece), two piece with athletic pants, shorts and shirt, pants and shirt, shirt and skirt, dress, shirt and athletic pants, other, or not shown. Model thinness was coded on a scale of one through five, consistent with other research on the appearance of models in women's health and fitness content (Conlin & Bissell, 2014). The five categories ranged from extremely thin (1) to extremely overweight (5), with a code of (3) representing a model of average thinness with the general population. Model muscularity was coded as three categories, where options were no muscle tone visible, muscles defined and visible, and muscles pronounced and bulky.

Intercoder Reliability

Two coders were trained and completed the necessary coding for this study. Coders participated in an initial coder instruction and training seminar, and the coding scheme was refined and developed at that time. During this coder training, particular attention was paid to developing the categories for the type of pin, as well as establishing specific measures for model thinness and muscularity. Once final coding categories were established, two coders coded the same 150 pins, which represented 15.7 percent of the final sample. After analysis, it was revealed that the two coders had a Cohen's Kappa reliability of κ

= .88 for all variables combined, with all variables satisfying the acceptable $\kappa = .80$ level. With this acceptable level of reliability, coders were assigned a portion of the sample and began coding.

Results

The resulting sample selected for analysis in this study included 953 pins. Research Question 1 asked the proportion of recipes, exercise content, health content, purchasable content, and inspirational content in Pinterest's *Health & Fitness* category. Table 1 displays the specific type of pin as well as the sub-categories that each individual pin was assigned to. Almost half of the sample fell within the exercise sub-category, and another quarter of the sample was recipes and food. A chi-square demonstrated that there was significance within this model $\chi^2(14) = 782.74, p < .001$. Therefore, the answer to RQ1 is that the majority of pins were about exercise, followed by recipes and food.

Research Question 2 asked which types of content in Pinterest's *Health & Fitness* category receive the most repins and the most likes. Table 2 displays the sub-categories and their respective repins and likes. An ANOVA was used to determine if there was significance between these differences, revealing that there was indeed significance in the model for repins $F(4, 793) = 5.09, p < .001$. Bonferroni post-hoc tests indicated that there was significance between recipes/food and exercise, $p < .001$, recipes/food and purchasable, $p = .04$, and recipes/food and inspirational, $p = .02$, where recipes/food had the greater amount of repins in each relationship. There was also significance in the model for likes $F(4, 793) = 3.47, p = .008$.

Table 1
Sub-Categories and Type of Pins

Sub-Category	Type of Pin	Frequency and % Within Sample	Frequency Within Sub-Category
Recipes/Food		233 (24.5%)	
	Recipes- Health		145
	Recipes- Exercise		10
	Recipes- Weight-loss		78
Exercise		453 (47.5%)	
	Exercise Instructions		172
	Tone/Fix Specific		178
	Body Part		
	Stretching/ Flexibility/Yoga		53
	Exercise Challenge		50
Health		85 (8.9%)	
	General Health		35
	Health- Exercise		12
	Health- Diet		38
Purchasable		70 (7.3%)	
	Clothing		50
	Exercise Equipment		17
	Apps		3
Inspirational		104 (10.9%)	
	Inspirational		104
Other		8 (0.8%)	
			953
Total			

Table 2
Sub-Categories with Repins and Likes

Sub-Category	Mean Repins (SD)	Mean Likes (SD)
Recipes/Food	3,383.43 (10303.48)	517.82 (1705.09)
Exercise	1,487.28 (2271.30)	233.69 (347.04)
Health	1,469.51 (2284.03)	251.94 (369.88)
Purchasable	995.36 (1526.17)	261.67 (374.68)
Inspirational	1,161.05 (1829.05)	255.72 (453.67)

Again, Bonferroni post-hoc tests revealed that recipes/food had significantly more likes than exercise $p = .004$. Therefore, the answer to RQ2 is that recipes/food had more repins and more likes than the other categories.

Research Question 3a asked about the thinness of models featured in Pinterest's *Health & Fitness* category. An ANOVA was used to assess this research question. In the recipes/food sub-category, the mean thinness for models was 1.88 ($SD = .64$), and in the exercise category it was 2.07 ($SD = .56$). In the health sub-category the mean thinness was 2.24 ($SD = .83$); the purchasable sub-category had a mean thinness of 1.68 ($SD = .55$), and models in the inspirational sub-category had a mean thinness of 2.06 ($SD = .92$). There was significance in this model $F(4, 400) = 3.29$, $p = .01$. Bonferroni post-hoc tests revealed that models in the purchasable sub-category were significantly thinner than models in the exercise sub-category $p = .01$, and models in the health sub-category $p = .03$. Therefore, the answer to RQ3a is that models in pins that are pur-

Table 3
Sub-Categories and Muscularity

	Recipes/ Food	Exercise	Health	Purchas- able	Inspira- tional
No muscle tone visible	7	96	15	20	17
Muscles defined and visible	0	182	2	7	16
Muscles bulky and pronounced	1	37	0	1	3
Total	8	315	17	28	36

chasable (which generally link directly to an outside source to purchase merchandise) are significantly thinner than other models.

Research Question 3b asked about the muscularity of models featured in Pinterest's *Health & Fitness* category. A chi-square was used to assess this research question. Table 3 displays the sub-categories compared to the muscularity of models. There was significance within this model $\chi^2(8) = 49.62, p < .001$. Therefore, the answer to RQ3b is that muscular models were almost exclusively found in the exercise sub-group, and that proportionally more models with no muscle tone were found in the purchasable, health, and inspirational sub-categories.

Research Question 4a asked if there was a relationship between thinness and likes or repins. Pearson's correlation was used to assess this research question. The relationship between thinness and repins was significant $r(346) = .18, p < .001$, indicating that as models became less thin, the frequency of repins increased. The relationship

between thinness and likes was also significant $r(346) = .19, p < .001$, indicating that again, as models became less thin, the frequency of likes increased. Therefore, the answer to RQ4a is that models who were less thin received more repins and more likes.

Research Question 4b asked if there was a relationship between muscularity and likes or repins. Two one-way ANOVAs were used to assess this research question. Although there were differences in the numbers of repins and likes between the different muscularity categories, there was no significance in the model for repins $F(2, 343) = .73, p = .48$, or for likes $F(2, 343) = .43, p = .65$. Therefore, the answer to RQ4b is that there is no relationship between muscularity and likes or repins.

Research Question 5a asked, how frequently are the stomachs visible on models featured in Pinterest's *Health & Fitness* category? There were 197 models that appeared with their stomachs visible, and 217 models who appeared with their stomachs covered. A chi-square showed the difference was not significant $\chi^2(412) = .97, p = .37$. Thus, the answer to RQ5a is that there is no difference in the number of models who appear with their stomachs shown or covered.

Research Question 5b asked how frequently was a closeup of a specific body part shown on models featured in Pinterest's *Health & Fitness* category. Within the sample, a closeup was shown in 65 out of 417 pins, whereas no closeup was shown 352 times. This difference was significant $\chi^2(415) = 197.53, p < .001$. This means that the answer to RQ5b is that while closeups were significantly less prominent than not, 15.6% of the sample included models who were simply shown as a closeup of a body part.

Discussion

Pinterest, dominated by female users, represents a space where women—rather than magazine editors—determine which content appears for other users. This study revealed several interesting findings, both surrounding the content of the pins on Pinterest's *Health & Fitness* category, as well as the appearance of the models who are featured in the pins. First—related to the content of the pins—almost half of the entire sample fell into the exercise sub-category, with the majority of those pins either being exercise instructions or instructions on how to tone or fix a specific body part. This demonstrates the emphasis that is placed on exercise as a method for health and fitness in traditional magazines (see Willis & Knobloch-Westerwick, 2013). Additionally, recipes and food received the most repins and the most likes compared to the other categories.

Second—dealing with the appearance of the models—the majority of models appeared in athletic apparel, particularly tight leggings or workout/yoga pants with either a shirt or a separate bra top. Models in pins that were purchasable were significantly thinner than the other sub-categories, and models who were muscular were almost exclusively in exercise content. Interestingly, models who were less thin received both more repins and more likes. Finally, models were frequently shown with their stomachs exposed.

Health & Fitness Content

One of the more apparent findings in this content analysis was the prevalence of exercise pins, which dominated almost half of the entire sample. This was consistent with previous research on women's health and fitness con-

tent in magazines, which found that “exercise-related behaviors were referenced in the headlines more often than caloric reduction-related behaviors” (Willis & Knobloch-Westerwick, 2013, p. 7). However, another interesting aspect of the prevalence of exercise-related pins was that they were less likely to be repinned than recipe or food-related pins. This may be a result of people creating their own pins from a link outside Pinterest rather than pinning the content that other users have already pinned. Users can pin content that they find from an external website—thus creating a new pin—or repin the content that they see other users have already pinned. The prevalence of exercise content that receives less repins may also be a reflection of the diversity of exercise options that abound, where the number of repins and likes is spread out between the many different pins.

Another interesting type of content within the sample was the inspirational content, which generally consisted of pins that were intended only to inspire the pinner, not to instruct them on how to achieve their ideal health and fitness. The literature on women’s body image that comes from the study of magazine and other health and fitness content likely has not addressed inspirational content as the current study has, indicating that there is likely a lack of inspirational content present in health and fitness magazines—to our knowledge, this is the first study which has examined inspirational health and fitness content.

The health category—although health should be a primary component of Health & Fitness—represented a relatively small portion of the content in this study. This exemplifies the preoccupation with fitness and diet as a

means to achieve health that has been found in previous research of women's content (Willis & Knobloch-Westerwick, 2013), rather than an emphasis on overall health and healthy practices.

A recent investigation (Conlin & Bissell, 2014) found that almost 80 percent of health and fitness content in women's magazines was advertising content; however, this does not seem to be the case on Pinterest. Purchasable, advertisement-like content represented only seven percent of the entire sample. This difference in the amount of advertising or purchasable content may be representative of the idea that women are taking control of their health and fitness content. Rather than being exposed to content and images that intend to sell, removing gatekeepers and editors means that women would prefer to experience content that instructs them on health and fitness practices, rather than being exposed to products about health and fitness. Likewise, initial investigations into Pinterest revealed that sports teams (whose accounts act as gatekeepers) were including nearly a quarter of their content as purchasable items—such as jerseys or memorabilia (Conlin, McLemore, & Rush, 2014; Hambrick & Kang, 2015). When users are free to pin whatever content they deem important, the amount of purchasable content decreases dramatically. This is particularly enlightening considering that “females tend to make more use of the network's commercial capabilities” (Ottoni et al., 2013, p. 8). It seems that purchasable content may be more related to other categories, such as *Women's Fashion* or *Weddings*, as it does not abundantly appear in the *Health & Fitness* category.

Model Appearance and Body Image

One of the most promising and interesting findings in this study was the relationship between the thinness of the models on Pinterest and the amount of repins and likes that they received. Although traditional women's health and fitness content—and the majority of Pinterest *Health & Fitness* content—featured models who were exceptionally thin (see Malkin et al., 1999), as a model's size increased, the amount of repins and likes that the pin received also increased. This is certainly a step away from the thin, glamorous models who have been dominant in women's health and fitness content for years, at least in terms of feedback from media consumers. It may also be representative of the way that female consumers may be trying to combat the extraordinarily narrow representation of women's bodies. Pinterest is user-controlled and in this case, rather than just viewing what is thrown their way, women are repinning images of what they believe represents health and fitness. Female Pinterest users are choosing to repin and like models whose appearance seems to be more relatable and achievable. Even though the majority of pins featured models who were below average (the mean thinness on a scale of one through five, where one was exceptionally thin, was 2.06), as this thinness went away, pins received more interaction from users.

The idea that editors are promoting a thin-ideal while users would like to move away from this is exemplified by the fact that models in purchasable content were thinner than models in the other forms of content. These models in advertising campaigns—primarily for athletic apparel and equipment—are exceptionally thin, just like

the models that have been appearing in magazine and other women's content for years (Malkin et al., 1999). Interestingly, the purchasable category had the lowest mean repins of all the sub-categories, perhaps because women are seeking a way to break free from traditional methods of being sold products during their search for health and fitness content. Again this demonstrates the desire for control that women who use Pinterest for health and fitness are seeking.

Another interesting aspect of the appearance of the models within Pinterest's *Health & Fitness* category was the abundance of close-up photographs of a specific body part on a model. This was particularly apparent in the exercise sub-category, where close-ups up of stomachs, butts, legs, and interestingly, feet, abounded. Almost half of the photographs in the sample contained a model with her stomach showing, displaying and emphasizing a thin-ideal that centered around six-pack abs and a midsection with no extra fat or stretch marks. Pre-occupation with "fixing" a specific body part (see Bergstrom & Neighbors, 2006) is apparent in these photographs.

Pinterest and Planned Behavior

The Theory of Planned Behavior (see Ajzen, 1988; Ajzen, 2002) in relation to this study specifically deals with subjective norms and perceived behavioral control. Subjective norms are the perceived social norms that people feel that they have to adhere to, which affects their behaviors and actions (Ajzen, 2002). Similarly, people are more likely to complete actions and behaviors that they feel they have control over (Nejad et al., 2005). This is par-

ticularly relevant and important to the study of Pinterest's *Health & Fitness* content, as "women who diet and exercise for appearance-related reasons more likely use unhealthy, drastic body-shaping and weight loss behaviors and experience emotional distress and lower body image" (Willis & Knobloch-Westerwick, 2013, p. 7).

In a space where there is an abundance of inspirational content, users likely feel that they are in control of their own behavior, thus increasing the influence of TPB, which states that perceived behavioral control is important to the formation of behaviors and actions (Ajzen, 2002). The relative abundance of inspirational content may indicate a shift in power from content producers and editors to women themselves, which may also increase perceived behavioral control. Pinterest's *Health & Fitness* category often features inspirational quotes and pictures intended to inspire and motivate users. Women often pin these images to their own boards, and this action may increase perceived behavioral control. Not only do women have the control to take their health and fitness into their own hands, they have control over how they will do it—whether it is diet, exercise, or a combination of the two—and have the reassurance of other Pinterest users (through inspirational messages) that they are in control of their health and fitness.

However, models on Pinterest were still overwhelmingly thin, which replicates and precipitates subjective norms; women must be thin in order to be healthy and fit. The reinforcing of these subjective norms is damaging to female users, as "women who are unhappy with their bodies are at a greater risk for developing eating disorders

than women who are happy with their bodies” (Bergstrom & Neighbors, 2006, p. 979). Pinterest should be a space for women to control the images they collect, if not the images they are exposed to.

Limitations and Conclusions

The current study was limited in several ways. Primarily, content analysis alone is not sufficient to predict and explicate behavior. While the TPB provides a useful framework for understanding the importance of the content on Pinterest, the study of what female users are pinning is incomplete without an understanding of the users themselves. Future research should employ methods such as survey or experimental design in order to provide a more complex and complete understanding of Pinterest and its users. Additionally, the current study only used limited measures of thinness and muscularity. Further studies of the appearance of women on Pinterest should employ more complex measures, as well as include measures for other appearance-related variables, such as glamour.

Pinterest’s *Health & Fitness* category is an online space for women to collect and consolidate pictures, instructions, recipes, and inspiration for their health and fitness goals. Like other traditional women’s media before it, images on Pinterest show thin, fit women who direct media consumers to act and be like them. Also like women’s magazine content, Pinterest features a majority of exercise information rather than a healthy balance of fitness and diet, which is troubling because “the combination of exercising and calorie-intake reduction is recommended by current public health initiatives” (Willis &

Knobloch-Westerwick, 2013, p. 7). Female users are repeatedly exposed to pins such as the “Victoria’s Secret Model Workout” (2015), a pin that features a photograph of a faceless, exceptionally thin woman wearing only shorts and bra, displaying her fit physique and six-pack abs for other women to emulate. However, Pinterest’s *Health & Fitness* category also distinguishes itself from other forms of content in that it gives the users control over what appears, and removes the intermediary editors and gatekeepers who choose images for women to see. Pinterest users are exercising their control over content by repinning and liking content that features women who are less thin. Interestingly, the thinnest models also appear in purchasable advertising content, the primary kind of content which is still not defined by users themselves.

The study of Pinterest is imperative, as “Pinterest organizes and categorizes the online experience, giving users a space to collect things they enjoy, whether it is clothes, merchandise, recipes, or any other number of topics available online” (Conlin, McLemore, & Rush, 2014, p. 361). Women are the primary and dominant users of Pinterest; they have control over what they pin, thus recycling their norms and beliefs into the minds of other users. Women are seeking out health and fitness content from new and varying resources, including Pinterest, and research should address the changing media environment that gives women increasing control over the information they see and use.

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