

A Qualitative Analysis of Body Image on Social Media: Implications for Public Health Practice

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Abstract

Objective: Evaluate the use of social media tool Instagram to assess body image perception among young adults.

Methods: Instagram photos were analyzed for its content to evaluate the main purpose the hashtags. To evaluate emergent themes, open and axial coding qualitative methods were utilized.

Results: The more followers a user had on Instagram, the less hashtags were used to describe the photo, likely to draw in more followers. These hashtags were then analyzed and the results show three emergent themes: expectations or idolization, encouragement, and product promotion.

Conclusion: We provide an insight into the use of Instagram on the prevalence of body image-related hashtags. Public health professionals can utilize the trending hashtags identified in this study to reach a large population of young adults to provide encouragement for weight loss and body positivity, in turn expanding the scope of health education delivery methods.

Introduction

The National Eating Disorders Association (NEDA) defines body image as how an individual views him/herself in the mirror and it incorporates beliefs about our own appearance, including assumptions, feeling about body, and sense of control over body. This perception can be either positive or negative and NEDA defines negative body image, or low perceived body image, as a distorted perception that other individuals are more attractive than you based on their body and shape, thus, resulting in self-consciousness and the feeling of personal failure. On the other hand, positive body image refers to the appreciation of your natural body shape with self-confidence, as well as, understanding that physical appearance does not dictate a person's self-value [1].

The empirical evidence further notes that negative perceived body image is an early indicator of eating disorders. For example, Ackard and Peterson demonstrated that females with negative body image (self-perceived overweight status before puberty) were more likely to also have eating disorders [2]. Similarly, in evaluating eating disorder risk factors in 496 female adolescents over an eight-year period, showed that feelings of body dissatisfaction starting with age 13 to 16 triggered eating disorders among the participants [3], further demonstrating the negative behavioral impact of perceived body image. Despite such negative burden of low perceived body image, recent prevalence studies demonstrate an increasing trend among young adults [4] and thus there remains a critical need to identify the determinants of such perception.

Much of previous literature has demonstrated the role of media. For example, a study completed by Grabe et al. found that there is a small to moderate correlation between the exposure to thin body images in the media and body image concerns for women [5]. Yamamiya et al. evaluated 123 young college women and the extent to which media ideals had an effect on them. The researchers found that those who were exposed to thin-and-beautiful images in the media had a higher internalization to this ideal body image. However, those who received an intervention prior to exposure were less affected by the images [6]. Similarly, Derenne and Beresin [7] studied the

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role of media and body images ideals throughout history. They found that mass media always had a role in beauty ideals, thus, leading to body dissatisfaction in both men and women. The authors concluded that media exposure must be limited at a young age and focus on having children participate in activities that build their confidence and self-esteem [7]. Cumulatively, the current literature highlights the negative role of media on body image standards and norms for both men and women.

Furthermore, studies have shown that those who are constantly exposed to these idealistic body images in the media are more likely to develop an eating disorder. For example a study done by Tiggemann [8] evaluated 104 female undergraduate college students and the effects of the extent of exposure to magazine and television media regarding body image. The authors found that exposure to magazine articles had a positive association with beauty ideals influencing society, whereas TV had a negative association; demonstrating that images presented in the magazine have a strong effect on beauty ideals, specifically thin ideals presented to society, which can trigger an eating disorder.

While such studies have noted the traditional role of media, in more recent years, use of social media has become more dominant among adolescents and young adults. Studies on social media have noted that the tool can be utilized for promoting health or preventing illnesses. For example, Richardson and colleagues [9] evaluated the impact of Snoop Dogg, a well-known celebrity amongst the millennial generation, using Instagram to promote a cigar company, Executive Branch, during the Coachella Music Festival. The study results demonstrated that Snoop Dogg received over 10,000 likes and 200 comments in his photo he shared during the event. Similarly, in a YouTube analysis of eating disorder, Syed-Abdul, et al. [10] evaluated YouTube videos related to anorexia either informative regarding the consequences of anorexia or pro-anorexia. Researchers found that although there were more videos that were informative, pro-anorexia videos were viewed more often and favored three times more than informative videos. Similar analysis of social media on body image has not been evaluated in the literature.

Given the current burden of how poor body image can impact long-term outcomes, an evaluation of social media as a means to promote positive or negative body image is critical to understand the putative source of poor perceived body image, especially among adolescents and young adults. As such, the purpose of this project is to evaluate the use of social media to assess body image perception among young adults, which can further provide insight into eating disorders. Specifically, we focused on Instagram as it continues to be a strong resource because of its ability to capture a large audience, thus, has a great effect in promoting messages. Instagram has also been used in an academic setting due to this advantage. For instance, Salomon [11] utilized Instagram to connect with students and results showed Instagram users, compared to those of twitter and Facebook, engaged with University of California, Los Angeles (UCLA) Powell library the most. UCLA uses this outlet to post important announcements pertaining to grades and events. Instagram is also widely used by many young adults and captures a diverse demographic population. Furthermore, Instagram is the third most popular social network used by U.S. college students and it can also provide insight regarding social, cultural

and environmental issues pertaining to people's activities [12]. As such, in this study, we evaluated the prevalence of hashtags related to perceived body image on Instagram and conducted a content analysis to identify emergent themes.

Methods

In this qualitative study, we analyzed photos until we reached theoretical saturation. The kinds of photos that were evaluated in Instagram were body image photos shared by fitness models (who tend to be primarily females). Many females in this category promote fitness and try to inspire others to lose weight and get healthy. The primary author (HK) created an Instagram page for this study and used the mobile app version for analysis. Given that the trending topics are on the explore page, we decided to analyze that first; this page can be found by clicking on the magnifying glass icon. Upon refreshing the page 1-2 times, data analysis was started. The first 10 photos that were available on the explore posts page were collected as reports note that people are more likely to view the first page/items on Google more often than the latter and thus we hypothesized the same principle would apply to other search options as well. In fact, in a Google study, the first page had yielded results had the most traffic, 91.5% and as you continue to the next page, traffic went down to 4.8% and continued to decrease as the pages increased [13]. Once the photos were collected, two data recording sheets were created to analyze the content using grounded theory, which identified common themes through open and axial coding; the latter creating themes.

Two sets of recording sheets were created. The first recording sheet included a photo identifier (numbered 1-10), username (which was deleted upon analysis to ensure confidentiality), number of followers, number following, number of likes, number of comments, and number of hashtag(s) used. All spam items were excluded from analysis as were any pages that require paid viewership only and did not have any public content (regardless of payment status). For the second data recording sheet, the user information was reviewed and the following data were collected: the photo number caption describing the photo, the specific hashtag(s) used, and the number of photos under the same hashtag(s). The same data collection and analysis procedure was repeated two weeks apart to obtain a total of 20 photos. In addition, each photo was analyzed for its content to evaluate the main purpose and theme of the hashtags. To evaluate emergent themes, open and axial coding was utilized. Common hashtags were identified in open coding followed by categorization of such hashtags under common themes during axial coding. These further enabled us to identify overall framework of body image-related hashtags that are common in Instagram.

Results

Table 1 represents the first set of data that was collected in Instagram. The "Photo" category corresponds to the number of photo that was collected i.e. 1st, 2nd, 3rd photo. The account (ACNT) refers to the username who posted the photo. The username was deleted in the chart for confidentiality, thus an ID was assigned. The number of followers and the number each account was following back were recorded. The data collected that corresponds to the photos were, the number of likes under each photo, the number of comments under each photo, and

Photo	ACNT	ID	# Followers	# Following	# Likes	# Comments	# Hashtags used
1		101	11,300	763	454	38	9
2		102	3,126	0	931	10	29
3		103	2,800,00	70	19,197	108	8
4		104	2,537	1,664	137	10	9
5		105	618	424	45	5	5
6		106	16,00,000	1,381	7,138	21	6
7		107	1,55,000	298	4,347	46	0
8		108	57,200	791	353	5	1
9		109	2,575	566	177	16	4
10		110	4,44,000	636	10,598	231	1

Table 1: The first data collected of Instagram photos & accounts.

Photo	ACNT	ID	# Followers	# Following	# Likes	# Comments	# Hashtags used
11		111	7,512	852	752	17	16
12		112	1,600,000	110	41,577	310	0
13		113	72,100	806	1,391	12	3
14		114	150,000	746	6,981	61	0
15		115	12,300	138	1,300	19	0
16		116	6,700	2,585	1,892	99	21
17		117	160	1,439	262	18	26
18		118	3,340	718	303	8	15
19		119	1,700,000	1,399	21,935	341	6
20		110	153,000	108	2,300	54	0

Table 2: The second data collected of Instagram photos & accounts

the number of hashtags used under each photo. No photo was collected twice by the same account (Table 1).

Table 2 represents a second set of data that was collected 2 weeks from the first data. The "Photo" category corresponds to the number of photo that was collected i.e. 11th, 12th, 13th photo. The account (ACNT) refers to the username who posted the photo. The username was deleted in the chart for confidentiality, thus an ID was assigned. The number of followers and the number each account was following back were recorded. The data collected that corresponds to the photos were, the number of likes under each photo, the number of comments under each photo, and the number of hashtags used under each photo. No photo was collected twice by the same account (Table 2).

As noted in (Figure 1), we found a relationship between the number of followers and the number of hashtag(s) used to describe a photo. The more followers a user has on Instagram, the less hashtags used to describe the photo, and the fewer followers a user has, the more hashtags used to describe a photo (Figure 1).

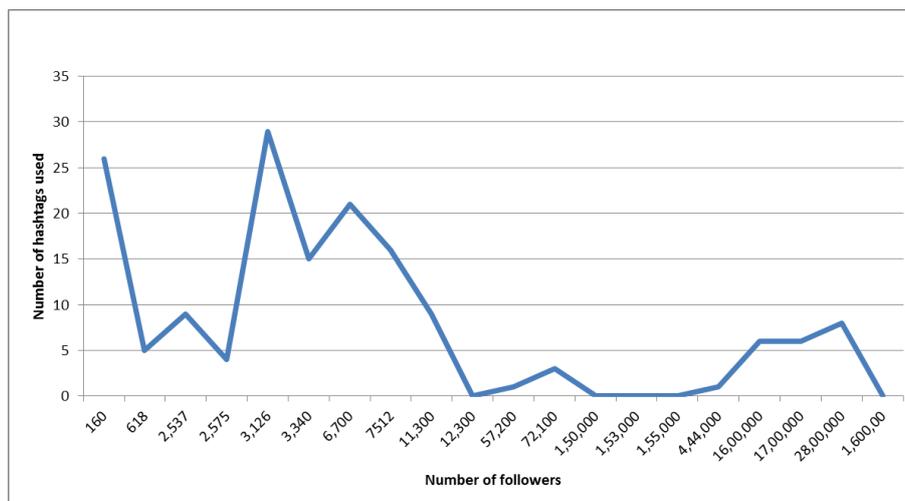
Figure 2 displays the top 10 body related hashtags used that were found in the data, based on ascending order (low to high), are, perfectbody 1,960, 173, fitchick 3,084,831, curves 3,729,191, girlwithmuscle 3,754,781, npc (national physique committee) 4,376,514, girlswholift 7,937,401, fitgirl 8,245,244, body 20,402,171, abs 23,408,232, fit 55,992,747 (Figure 2).

Upon analyzing the data in each table, three emergent themes were identified (Table 3): expectations or idolization, encouragement, and product promotion. The hashtag(s) associated with the theme, expectations or idolizations are, "girl

Theme	Hashtag	Number of photos
1. Expectation & Idolization associated hashtags	Beautiful	3303,54,930
	Fit chick	30,84,831
	Perfect body	19,60,173
	Girl body	19,413
	Vegan body	22,159
2. Encouragement associated hashtags	Motivation	61,78,593
	Believe	120,81,192
	Fit life	101,52,057
	Hard work	95,27,407
	Fitness motivation	60,03,484
	Eat healthy	32,88,876
	Love your body	10,78,349
	Love what you do	10,65,907
	Be the best you	1,33,442
Aspire to inspire	1,33,386	
3. Product promotion associated hashtags	Shredz	13,59,230
	Shredz army	5,48,563
	Shredz ambassador	6,473

Table 3: Emergent themes Identified in the Data collected in Instagram

body," "fit chick," "beautiful," "perfect body," and "vegan body." The second theme, encouragement, is associated with the hashtags, "motivation," "hard work," "aspiretoinspire," "believe," "fit life," and "bethebestyou." The final theme was product promotion. The hashtags associated with this theme were, "shredz," "shredzarmy," "shredzambassador."



Followers	hashtags used
160	26
618	5
2,537	9
2,575	4
3,126	29
3,340	15
6,700	21
7,512	16
11,300	9
12,300	0
57,200	1
72,100	3
1,50,000	0
1,53,000	0
1,55,000	0
4,44,000	1
16,00,000	6
17,00,000	6
28,00,000	8
1,600,00	0

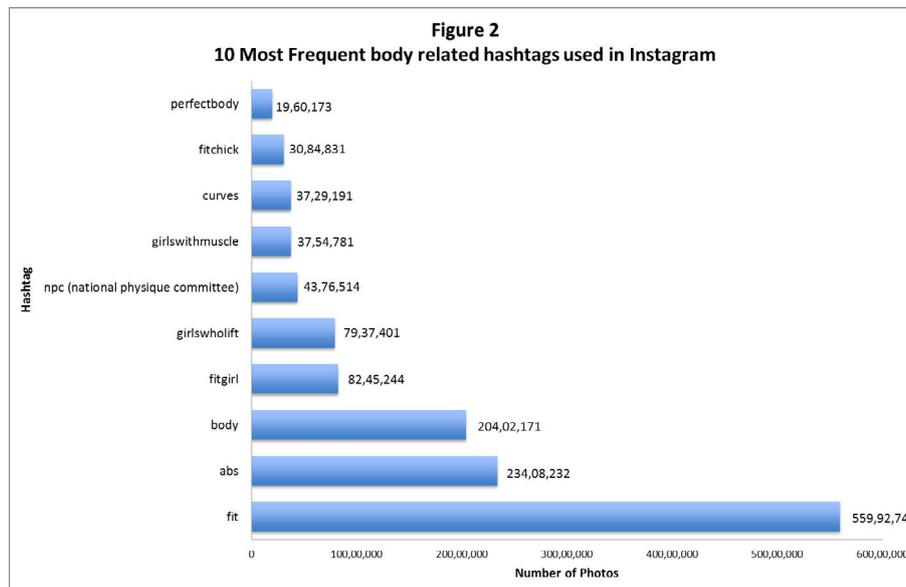
Figure 1: The Instagram user with the least amount of followers showed more use in hashtags to describe their photo. For example, the user with 160 followers and 3,126 followers used between 25-30 hashtags. As the number of followers increases, there is an overall decline in the amount of hashtags used.

Discussion

Body image perception, especially negative body image perception and its association to health outcomes, is a major public health issue. While the empirical evidence has highlighted the role of media, little research exists on social media, Instagram in particular. In this study, we utilized Instagram to assess the

prevalence of body image related hashtags. A major finding in our study was the emergent themes: idolization, encouragement, and product promotion.

The hashtags related to idolization were centered around words such as perfect, fit, beautiful, etc. and can lead to a standard to what a woman's body should look. For example,



Fit	559,92,747
Abs	234,08,232
Body	204,02,171
fit girl	82,45,244
girls wholift	79,37,401
Npc (national physique committee)	43,76,514
Girls with muscle	37,54,781
Curves	37,29,191
Fit chick	30,84,831
Perfect body	19,60,173

Figure 2: The 10 most frequently used body related hashtags were identified in ascending order. The hashtag “perfect body” had the least amount of photos. Then following from ascending order, fit chick, curves, girl with muscle, npc, girls who lift, fit girl, body, abs, and fit. The hashtag “fit” had the most amount of photos.

when users click the hashtag “girl body” under that one photo, they will see many other photos of “girl body.” These photos can have a variation of body types. However, they are still creating an expectation of what a girl body should look like because users are choosing to place their photo in a category. The effects of using these tags allow users to associate an image with these terms. “Vegan body” is associated with the diet vegan people have. This tag can set a standard for the vegan body image, creating an expectation and/or idolization for other vegan people. Some may be vegan for the body they desire or for other reasons. The remaining tags do have the same effect. If expectations are not met, the user is bound to feel low perceived body image as they are idolizing the photos.

The words associated with the theme of motivation encourage people to change their lifestyle to incorporate habits that will yield them results these photos express. This can have both a positive

and negative effect among Instagram users. It sends a positive message that fitness is healthy and we should all incorporate that into our life. However, these photos that are being used can create unrealistic expectations. Many people will overlook that genetics do play a role in how your body develops, as well as, many other factors. Due to natural selection, everyone is not meant to have the same body. We are all different, and differences should be embraced for survival reasons. This message is intended to encourage changing your lifestyle for improving health, but it’s also sending a message of the expectations of body image, thus, users overlook the reality.

Finally, the common words associated with the theme of product promotion were related to “shredz.” Shredz is a fitness company that provides resources to lose weight and get fit. These resources range from weight loss supplements, detox pills and protein drinks. The company’s mission is to help people

achieve their ideal body through their products. Instagram users, who have the ideal body image to represent the company, are contacted by companies, like shredz, to promote their products. Users that sign a contract with the company are paid when promoting their products. The incentive behind these Instagram posts, showcasing their body and promoting the product in their caption, is likely for the profit they receive. Thus, these posts provide unrealistic expectations of the product itself, and the results it achieves.

Furthermore, we noted that the higher the number of followers the less the hashtags, a result contradictory to what we expected. While limited literature exists on the reasons for such a trend, we hypothesize that given popularity on Instagram is determined by number of followers, those with fewer number of followers are likely to use more to attract views; though future research on whether these hashtags are focused on positive or negative body image would be worth evaluating. Furthermore, analyzing the purpose of the hashtags are needed. For example, are more hashtags related to increase visibility and is that why those with less followers choose to use a higher number? While our results lead us to this hypothesis, further studies are needed.

The results noted in our study should be interpreted in the context of limitations. Instagram is not the only source of social media networking and thus our study cannot assess the larger impact of social media on body image. Furthermore, we limited our search to public accounts and thus relevant hashtags may have been omitted from the search as well as paid content may over saturate the explore page. Our study, given the cross-sectional nature, cannot assess causality on whether the hashtags influence actual perceived body image; a question worth further investigation. Notwithstanding such limitations, we provide one of the first insights into the use of Instagram on health-related outcomes; specifically the prevalence of body image-related hashtags. Our results note that while some major themes on Instagram idolization of the body and product promotion, positive encouragement is also present. As such, public health professionals can utilize the trending hashtags

identified in this study to reach a large population of young adults to provide encouragement for weight loss and body positivity, in turn expanding the scope of health education delivery methods.

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