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# Network Engagement Behaviors of Three Online Diet and Exercise Programs

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## Introduction

Diet and exercise management has become a highly commercialized industry, and as many individuals find the task of self-regulating their diet and exercise to be too daunting an effort to complete on their own, programs that offer guidelines for success are now a dime-a-dozen. However, due to the sensitive nature of weight loss and weight management, this type of information is not freely shared by many individuals within their close network of peers, as shame and judgment are feared, even though studies have proven that social support is paramount to successful weight loss (Kulik, Ennett, Ward, Bowling, Fisher & Tate, 2015, p. 118). The traditional face-to-face (F2F) weigh-in accountability model is now being challenged by programs that are offered completely online, defying the idea that accountability is only achievable when individuals share information in-person. Participants of many weight loss-driven studies have noted that it was the social support garnished by a support system that most greatly aided them in their successful weight loss endeavors, or the lack thereof that made them unsuccessful in their efforts (Faw, 2014; Webber, Tate & Bowling, 2008, p. 1094; Leggat-Cook & Chamberlain, 2012).

Social support is paramount for success in information sharing, and is defined as the “interpersonal exchange that can make an individual feel either loved, esteemed, accepted, valued or motivated” (Ballantine & Stephenson, 2011, p. 323). However, the sensitive nature of disclosing one’s health, specifically weight, is found to be embarrassing to many people if they are not satisfied with their physique, and it is possible that some individuals believe that the revelation of their weight will elicit judgment and ridicule amongst their peers. The fear of failing to successfully complete a weight loss program is often crippling, to the point that many individuals are too scared to ever start a diet or exercise regimen that’s based on being held accountable by one’s peers, but studies have shown that those with social support (grouped participants) lose more weight than those who attempt a program alone (Ballantine & Stephenson, 2011, p. 333).

The classic F2F Weight Watcher’s model is founded on the need for vulnerability and accountability, with participants revealing a very transparent representation of themselves at weekly meetings, inclusive of divulging food diaries and conducting a public weigh-in on a scale. Many people have found success through participating in this style of program, as a support group is formed, which some having even described it as being therapeutic and spiritual (Ballantine & Stephenson, 2011, p. 333), but for individuals who so greatly fear failure and embarrassment, this F2F model of accountability is not an attractive option.

Individuals fearing the failure of a weight loss attempt are often discouraged when seeking support from close family and friends, instead

preferring a state of heightened anonymity, which was the most highly stated reason for choosing an online weight loss program over a F2F program, in a study conducted by Pagoto et al. (2014, p. 1036). While failing to complete an online weight loss program is still highly probable, autonomy is increased as one's failure does not have to be publically revealed, and as the individual is in control of sharing what information they choose, embarrassment and shame are minimized.

Research potential is abounding in the area of social network analysis pertaining to individuals finding support and motivation for engaging in online health and wellness programs. While many studies have been performed pertaining to users' information exchange in weight loss efforts across online platforms, including social media sites Twitter and Facebook (Turner-McGrievy & Tate, 2013; Ballantine & Stephenson, 2011; Pagoto et al., 2014; Webber et al., 2008; Hwang et al., 2010; Leggatt-Cook & Chamberlain, 2012), research has not been published pertaining to the social media site, Instagram. Instagram offers what many dieters would consider a combination of the best features offered by Facebook and Twitter, in that photos and text can be uploaded (a photo or video must be included in order to post on this platform), while also offering the use of hashtags, which have the ability to expand one's network with other like-minded individuals who are also posting about the same topic. The text maximum is far greater than Twitter's maximum of 140 characters per post, therefore allowing more thoughtful content and multiple hashtags to be used per post.

Additional safety and anonymity can be found via Instagram, as a user can create a profile that they perceive does not include any personally identifying information (a combination of both technical and social anonymity as discussed prior), therefore minimizing any risk that an adverse reaction that has the potential to elicit shame or judgment from the group could be connected to them as an individual. Other Instagram users find solace in being able to post pictures of their changing bodies, but without their real name being tied to their account, thereby having a greater perceived degree of anonymity.

## **Literature Review**

The findings of the study conducted by Pagoto et al. (2014) show that obese adults cited their family as being the greatest barrier to gaining social support in weight loss attempts, as they promoted a stigmatizing behavior greater than that found amongst their other networks, including friends, coworkers and social connections. According to a study by Hwang et al. (2010), members of online weight loss communities most greatly valued the convenience, anonymity, and non-judgmental interactions within their network as unique characteristics offered through Internet-mediated support when compared to F2F support. In the same

study, the major support themes that were revealed through a combination of forum content analysis, surveys and interviews, included encouragement and motivation, increased access to relevant information and shared experiences; sub-themes included testimonies, recognition, accountability, competition and humor.

According to the aforementioned study conducted by Pagoto et al. (2014), participants reported that they used Facebook to stay connected with family and friends, having close ties with over 80% of the network on this platform, as opposed to Twitter, which was reportedly used to make new friends, with less than 20% of the individuals considered as being connections with close ties. Overweight participants of the study found greater non-judgmental support from their Twitter network, versus their Facebook network, reporting on increased positive social influence and decreased negative social influence when compared to their in-person relationships. They also reported that greater engagement within the online weight loss social network had a causal relationship to greater weight loss, which is also supported by a study by Webber, Tate, and Bowling (2008) which revealed that greater program utilization is associated with greater weight loss.

A study conducted by Turner-McGrievy and Tate (2013) specifically analyzed the social support of participants who used Twitter to engage in online weight loss efforts, and revealed that informational support comprised the majority of the tweets (75%), followed by teaching, such as giving instruction, and status updates. Status updates were seen as a statement of one's efforts, such as restraining oneself from indulging in a donut in the office breakroom or having just completed a gym workout, and were posted to garnish emotional support in one's activities. According to the researchers of this study, greater engagement through Twitter was associated with greater weight loss. A unique characteristic of Twitter is a very limited character count for posts, 140 being the max, therefore messages must be direct and to the point.

Christopherson (2007) also includes that anonymity provides multiple functions in relation to privacy, including catharsis and autonomy. Catharsis is the unhindered expression of thoughts and feelings, and can only be brought about when one no longer fears sharing particular information. Weight loss bloggers are often known for their levels of unhindered expression, recanting all of their food in-take and the resulting effects on their body, such as pain or discomfort. Autonomy however involves the ability for one to test new behaviors without the fear of social consequences, such as being admonished. An example of this would include participants posting almost-naked pictures of themselves online to represent their bodies before and after completing a health and wellness based program, a behavior that would normally be considered inappropriate in the majority of other social networks.

## **The Construction of One's "Real" Self**

Another reason that weight loss is such a difficult subject for many people to approach in freely discussing with their peers and close network, is that our bodies are a representation of who we are and who we think that we should be (Leipämaa-Leskinen, 2011). Research by Leipämaa-Leskinen (2011), analyzing the meanings of body and identity when dieting through online diaries, produced findings that there are three themes showing the cultural meanings of one's body when dieting: towards a better body, the ashamed body (dissatisfaction), and being back in control of one's body. The idea of control has a moral undertone, and dieting efforts or the ability to restrain oneself from consuming foods that have a negative impact on one's behavior to lose weight, are often discussed using words such as "good" or "bad", "cheat" and "reward". Leipämaa-Leskinen (2011) notes that when weight loss program participants weigh themselves, whether in a F2F program or to post to an online accountability platform, it is a moment of truth that to some extent tests their goodness as humans, or their capability to manage and control themselves; Mycroft (2008) even goes so far as to say that women view their body fat as an indicator of moral weakness. A study by Mycroft (2008, p. 1042), analyzed women in a F2F weight loss accountability group and revealed that through verbiage exchanged, both the group leaders and participants created a mindset that dieting is both an accountable and morally sanctionable matter, and is a representation of one's satisfaction with oneself.

Social media as a platform of exchange is also unique in that the representations, often in the form of photos called 'selfies', are both produced and disseminated by the individuals themselves. O'Connor (2014, p. 11) notes that "the selfie is not just a self-portrait; it is an image of oneself by oneself and published by oneself". The representation of oneself is an emotional activity, as the components of the picture are closely tied to one's life and how they want others to view them. Regarding the selfie, "it becomes the field of present reality and largely dissolves the boundary between the subject and the object... the selfie straddles, stretches and even dissolves the boundary between the subjective and the collective, the public and the private", (O'Connor, 2014, p. 18). According to Leipämaa-Leskinen (2011), reality is created between individuals, and that the meaning of one's identity with regards to their body, is constructed through social interactions; to some dieters, these interactions are a promise of the ability to create a totally "new me".

Another area of online weight loss engagement and information exchange, that often involves the use of photos to represent oneself, is blogging. A content analysis of 10 individuals' blogs, all authored by females and created for the purpose of gaining support and accountability in their weight loss efforts, revealed that the bloggers most successful in creating a representation of themselves, that

was perceived to be authentic by the readership, used a variety of content on their site. Progress photos of the individual showing changes in their body, along with pictures of their weight when on a scale, were perceived to be the greatest measures of authenticity (Leggatt-Cook & Chamberlain, 2012). The content also revealed that bloggers who had an elevated level of catharsis, being perceived as writing and sharing very vulnerable content (a humorous tone seemed to help), elicited a notable amount of support from their readership; they also needed to post with a certain frequency, as to not be sporadic in their posts and then risk losing their blog visitors. Additional types of content included exercise diaries, meal menus and recipes, and reviews of particular products that were used in order to maximize their weight loss efforts.

The behavior of creating an authentic self online is much more challenging than creating an authentic self in-person, as we have conditioned ourselves to be wary of the information shared in a virtual environment. The research article by Christopherson (2007), includes the phrase “On the Internet, Nobody Knows You’re a Dog” in the title, as an example of the fact that social behaviors are easily modified online, both positively and negatively, due to the lack of physical boundaries and parameters that are normally present when one shares information in person.

Two other theories stemming from the field of psychology that are heavily relied upon in the literature are the deindividuation and SIDE theories (Christopherson, 2007), the premise of both being that as an individual is part of a group, their level of individuality is lessened due to increased anonymity, and they feel more comfortable engaging in behavior that is considered to be a norm by the group. This increased level of anonymity also promotes a reduction of inner restraints, as individuals no longer fear being singled out and criticized for their behavior; posting practically naked progress photos is a good example, as well as sharing pictures of every item eaten during the weight loss program, behaviors that could be considered outside of the group to be inappropriate or narcissistic.

## **Study and Results**

Content posted by three online-based diet and exercise programs was collected for the month of January 2016 to answer the following questions:

- What is the most engaging type of content published by diet and exercise program owners to their online networks?
- When comparing diet/ exercise programs and their content published across the social media platforms Facebook, Twitter, and Instagram, what is the optimal platform for network engagement?

The hypothesis for the study are as follows:

- H1 – Transformation photos that include full-body images, promoting the users’ success of the program as depicted by a before and after photo, generate the greatest engagement, as content shared by the program creator.
- H2 – Content published on Instagram by diet and exercise program owners receives greater engagement than similar content when posted on Facebook and/or Twitter.

The programs producing the analyzed content included Kayla Itsines “Bikini Body Guide (BBG)”, Jim Stoppani (JS), and Whole30. BBG is a fitness-driven 12-week exercise guide, marketed towards young women. The JS program is also a 12-week program, but is a combination of diet and fitness, and is geared towards men. Both BBG and JS heavily rely on users purchasing their products in order to participate, as BBG can only be accessed through a monthly subscription-based application, and JS promotes branded dietary supplements for purchase, such as protein and meal replacement powders. Both of these programs are also named after their founders, and all content published is from the voice of the program founders, Kayla Itsines and/or Jim Stoppani. Whole30 is a free 30-day program marketed towards both men and women, and encourages participants to take back control of their mind and body by strictly eliminating inflammatory foods for the month-long period. The content posted is from the voice of a team and guest participants are often ‘given the mic’ per se for a few days of posting.

The criteria for the three programs chosen included that each of the programs needed at minimum 100,000 followers on Instagram, and that they needed to have an active presence on all three of the currently popular social media platforms, Facebook, Twitter, and Instagram, as part of the study objectives included determining whether or not there is an optimal platform for publishing content to participants of diet and exercise programs, when comparing the three platforms listed. The last criteria was that the program needed to be entirely marketed and run online, without formal in-person event sponsorship.

As 45% of Americans report having a New Years resolution (statisticsbrain.com), with the #1 resolution being weight loss, we chose the month of January as our data collection period. Approximately 2000 published posts were collected over the 30-day period of January 1-30, 2016, and were inclusive of pictures, videos, and text. Due to time limitations, many of the Twitter posts by Jim Stoppani containing only text were removed as they comprised the vast majority of the posts collected and were lacking in the desired visual content, therefore leaving 926 posts to be coded. Instagram included 152 posts by KS, 76 by Whole30, and 68 by JS. Facebook included 165 posts by KS,

56 by Whole30, and 77 by JS. Finally, Twitter was comprised of 138 posts by KS, 113 by Whole30, and 81 by JS.

The coding scheme used incorporated the five types of social support as outlined by Turner-McGrievy and Tate (2013), in addition to codes that noted whether or not a post included a picture or a video, accompanying textual content, and the degree of exposure on behalf of the individual posting. See Appendix A for the full coding scheme. The social support found via Instagram posts across the three programs is as follows:

<b>Instagram Visual Content</b>	<b>Instagram Textual Content</b>	<b>Instagram Degree of Exposure</b>	<b>Instagram 5 Types of Social Support</b>
<ul style="list-style-type: none"> <li>• A1- Selfies = 81</li> <li>• A2- Transformations = 50</li> <li>• A3- Food-related = 55</li> <li>• A4- Exercise-related = 18</li> <li>• A5- Text-based Picture = 34</li> <li>• A6- Product Promotion = 13</li> <li>• A7- Cartoon = 5</li> <li>• A8- Other = 40</li> </ul>	<ul style="list-style-type: none"> <li>• B1- Informational = 63</li> <li>• B2- Humorous = 73</li> <li>• B3- Call for Response = 20</li> <li>• B4- Encouragement = 31</li> <li>• B5- Product Promotion= 54</li> <li>• B6- Hashtags Included # = 3</li> <li>• B7- Users Tagged @ = 52</li> </ul>	<ul style="list-style-type: none"> <li>• C1- Low = 133</li> <li>• C2- Medium = 99</li> <li>• C3- High = 64</li> </ul>	<ul style="list-style-type: none"> <li>• D1- Informational = 98</li> <li>• D2- Tangible = 0</li> <li>• D3- Esteem = 120</li> <li>• D4- Network = 51</li> <li>• D5- Emotional = 27</li> </ul>

While the selfie and transformation photos elicited great amounts of engagement from all three of the programs, this category of content was second in generating the most engagement. The content that generated the greatest amount of likes and comments for all three programs were humorous posts that had little to do with the programs themselves, but were instead lighthearted and found to be relatable and relevant to followers within the network.

It was determined that the greatest amount of engagement for all three programs was found on Instagram, in the amount of initial followers when compared to Facebook and Twitter networks, as well as the amount of likes and comments for the same content when posted across all three platforms. A random sample of posts was taken for each of the three programs that measured the amount of engagement for the same type of content when posted across all three of the analyzed platforms. Based on our findings, the H1 hypothesis that transformation photos that include full-body images, promoting the users' success of the program as depicted by a before and after photo, generate the greatest engagement on Instagram, in the form of likes, as content shared by the program creator, was null. However, the H2 hypothesis that content published on Instagram by diet and exercise program owners receives greater engagement than similar content when posted on Facebook and/or Twitter was confirmed.

## Limitations and Future Research Potential

Limitations of this study relate to the data being collected historically, which was 6-9 months after the program owners initially posted the content, and while we believe that the majority of engagement (likes, comments, views, shares etc.) took place within the initial 24 hours of the content being posted, we are unable at this time to verify the timeliness of engagement. Possible areas of future research include a textual analysis of users' comments to determine the level of engagement desired by the program owners of their audience; some owners may be satisfied with thousands of likes while others want to elicit text-based responses in the comments. It is also of interest to determine what content shared on Instagram by a program participant garnishes the greatest amount of social support, and whether or not the selfie and/or transformation photo reigns supreme, as this is a representation of what the majority of diet and exercise participants hope to accomplish. The creation of a publically accessible profile and use of particular hashtags is also hypothesized to increase engagement, and in turn motivates the individual to continue with the weight loss program as they receive constant validation when sharing their weight loss efforts.

This research is taken from the sharing perspective of the program producers/ owners and the content that they share within their networks. As all three of the analyzed programs conduct their relationship management solely online, without formally hosted meetings or regular events for users to engage with the program authorities, it is imperative that these businesses take a strategic approach in engaging and growing their online networks through the content that they publish.

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## Appendix A Coding Scheme

### Visual Content

- A1 - self (selfies)
- A2 - before/ after photos
- A3- food-related
- A4 - exercise-related
- A5- text
- A6- product promotion
- A7- cartoon
- A8- all others

### Textual Content

- B1- informational
- B2- humorous
- B3- call for response
- B4- encouragement
- B5- product promotion
- B6 – hashtags included #
- B7 – users tagged @

### Degree of Exposure

- C1- low (ex: food photos tagged with the user who made the recipe)
- C2- medium (ex: fully clothed user tagged, their personal story)
- C3- high (ex: bikini photos, before and after)

### 5 Types of Social Support

- D1- Informational
- D2- Tangible
- D3- Esteem (trying to boost their self-esteem)
- D4- Network
- D5- Emotional
- \* Turner-McGrievy & Tate (2013)