

#Yoga on Instagram: Understanding the Nature of Yoga in the Online Conversation and Community

Abstract

Background and Aim: The purpose of the present study was to investigate #yoga on Instagram to better understand the nature of who is posting about yoga, in addition to whether the traditional teachings are present. **Methods:** A multimethod approach was utilized for this study. Using the Netlytic program, a text and content analysis ($n = 35,000$) was conducted to examine authors' captions/comments associated with #yoga collected over 9 days. An image and caption coding scheme was developed and used to analyze 100 unique authors and images from the larger dataset. **Results:** The text analysis revealed #fitness was the most cited word ($n = 5491$), suggesting an emphasis on the physical aspect of yoga. The content analysis suggested that the majority of words were categorized as good feelings ($n = 32,747$; 51%) and appearance ($n = 30,351$; 42%), while only a small amount was categorized as traditional teachings ($n = 1703$; 3%). Images revealed mostly women ($n = 89$; 89%), who were underweight ($n = 68$; 68%), in minimal clothing (70%), demonstrating a basic pose ($n = 51$; 51%), in an indoor environment ($n = 57$; 57%). **Conclusion:** According to the text, content, and image analyses, #yoga on Instagram seems to emphasize the physical nature of yoga as consistent with the commercialization of yoga and not traditional teachings of the practice.

Keywords: *Eight limbs, fitness, Instagram, netlytic, yoga*

Introduction

The word yoga is derived from a Sanskrit root *yuj* meaning to “yoke” or “union” and involves concentrating on the interconnectedness of the mind, body, and spirit.^[1] Modern yoga practices are associated with many variations of Hatha yoga (i.e., Iyengar, Sivananda, Vinyasa, and Ashtanga); however, yoga is ultimately to experience contemplative states of consciousness and spirituality.^[2] Yoga is separated into eight limbs that consist of ethical principles for purposeful living while acknowledging health, mindfulness, well-being, and spiritual aspects.^[1-3] According to yoga guru Patanjali's writings, the *Yoga Sutras, asana* (physical postures), is the most basic limb and the primary focus in western practices.^[1,4]

The motivation to practice yoga is different for everyone and is likely to change over time with continued practice. For example, Park *et al.*^[5] reported that the motivations for yoga changed (with time and practice) from fitness and stress relief to spirituality.

In addition, the commercialization of yoga in North America may be altering the perception of yoga as a spiritual practice. Modern-day society has increased the demands of a global market for yoga, reflecting a heightened desire for beauty, flexibility, and fitness as well as health goals of stress reduction.^[5,6] However, Kannada Pattabhi Jois (a prominent Indian yoga guru that brought Vinyasa yoga to the West) confirmed that practicing yoga for physical/mental benefits contradicts the teachings of the eight limbs and may not fulfill the true path to yogic enlightenment.^[4]

Further, the rise of social networking sites in recent years may be altering the way people view yoga. For example, Instagram has become a popular method of communication and has allowed for the emergence of health and wellness content as well as social health support.^[4] There has been little empirical evidence of yoga on Instagram; however, one study suggested a focus on physical appearance and physical strength in images, as opposed to, attaining a deeper connection with a higher power

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within one's self.^[4] The current study builds upon Cowans^[4] using the computer-mediated communication (CMC) theory. In brief, it suggests that Instagram could be used to describe communication/interaction on a semi-public/public platform through the use of visual displays of images and text-based captions.^[7] The communication process model^[8] describes the CMC theory's online interactions between the sender (i.e., author) and receiver (i.e., followers) through a channel and providing feedback [Figure 1].^[4] Therefore, using the CMC theory and communication privacy management (CPM), the current study investigated #yoga on Instagram (with over 60 million posts as of January 2, 2019) to better understand if yoga students and teachers' posts are consistent with the primary reasons for practicing yoga. It is important to examine the relationship between the prevalence of #yoga on Instagram and the core principles of yoga taught by traditional yoga gurus because the messages online may be skewing how individuals understand the purpose of yoga and thus may not receive the full benefit of enhancing one's well-being in terms of spirituality.

To guide this study, the following research questions (RQ) were developed:

- RQ 1: What themes/patterns most prominently emerge within the comments and conversation associated with #yoga posts on Instagram?
- RQ 2: What themes/patterns most prominently emerge within a subset of #yoga images?

Methods

Research question 1

Data collection (image selection) and Netlytic text analysis: Using an open-source software,^[9] all tagged media with #yoga on Instagram were downloaded (i.e., when the post was tagged, not necessarily when it was posted). The download occurred on October 16, 2017, and captured all posts every hour until the maximum allowed posts were

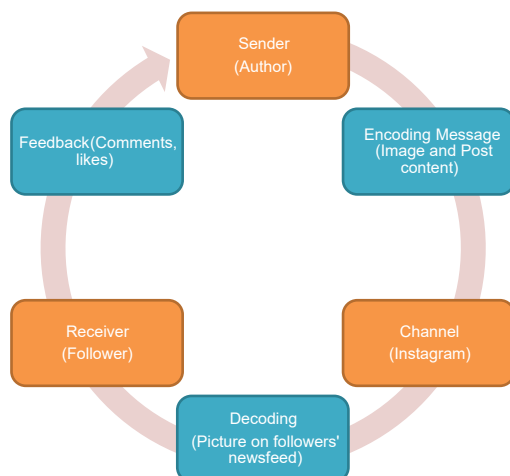


Figure 1: Adaptation of Walter's Computer-mediated communication theory using the communications process model as a framework

reached (i.e., 35,000, which occurred after approximately 9 days). For this study, Netlytic^[9] was used to identify the most popular words in the #yoga dataset ($n = 35,000$), and a content category analysis was conducted to identify themes of the discussion. Netlytic^[9] creates categories of words and phrases to represent broader categories (e.g., positive vs. negative words), and then, automatically identifies what entries in the data set belong to what predetermined category based on synonyms. Using three predetermined categories^[9] as a framework, 17 words characterizing the practice of yoga were manually inputted in each category, for a total of 51 words. These categories include good feelings (e.g., peace, free, and spiritual), bad feelings (e.g., sore, bored, and tired), and appearance (e.g., healthy, fit, and abs). An additional custom category was added with 17 words (e.g., eight limbs) to include the names of the eight limbs of yoga (e.g., asana, pranayama, and pratyahara) as well as each of the niyamas and yamas (e.g., santosha, tapas, soucha, and brahmacharya).

Research question 2

Data cleaning, coding, and reliability: The dataset ($n = 35,000$) was cleaned to include only images where the author (poster) of the image that had used #yoga in the caption. In addition, list-wise deletions were made to remove any image that was a video, a private account, or a deleted account/image. If the image contained a collage of pictures, the most prominent picture or the first image in a multi-picture display was used. All images were considered *unique*, meaning that there were no duplications of authors/images in the cleaned dataset ($n = 22,328$). From the remaining 22,328 images, 100 images (similar to Cowans^[4]) were selectively chosen to include only static images of people in yoga (i.e., asana or meditative) poses for content analysis and coding procedures. A similar coding scheme to Cowans^[4] was used [Table 1], in addition to the body-image assessment Body Mass Index for Obesity figure rating scale (BMI-O) to objectively assess the body size of those present in the image.^[14] Captions and hashtags were used to help clarify ambiguous intentions of image content.^[10] Two independent coders assessed the images characteristics. As presented in Table 1, this produced acceptable levels of agreement on all variables.^[15] Overall, the percent agreement between the two coders was 89%. When a disagreement arose, both coders met, discussed, and agreed on a final coding decision.

Results

Among the 35,000 posts downloaded, there were 201,635 unique words associated with the posts (in the description of the image or in the comments associated with the image). The most commonly used words (RQ 1) are described in Table 2 with #fitness being the most cited word with 5648 instances (after removing #yoga from the analysis). The four content categories (i.e., appearance, good feelings, bad feelings, and eight limbs), based on

Table 1: Description of image-coded variables (n=100)

Variable	Description	Details	Intraclass correlation
Gender	Images coded to include the gender of the person/people in the image	Gender included the binary labels of man or woman in the image	0.94
Amount	The number of people present in the image will be coded (i.e., other students, yoga teacher, partner yoga)	The number of people were counted in the image and later put into categories of one person or two or more people in the photograph	0.99
Clothing	Images were coded ^[7] to assess if the person/people in the image was/were wearing minimal clothing or not	Minimal clothing was coded to include if the person/people present in the image wore only sports bra with no shirt, no pants, nude, or bathing suit	0.96
Yoga experience	The images were coded to include the level of the yoga pose to determine if it was advanced or not	The images were advanced yoga posture including any type of arm balance, handstand, headstand, contortionist pose, or a demonstration of extreme flexibility or strength beyond the average human's capacity, with discretion remaining up to the coder, and agreed upon between coders if there are discrepancies ^[7]	0.89
Body size	The present study utilized the BMI-O figure rating scale to assess the body size of the person in the photograph ^[10]	Body sizes were coded on a scale from 1 to 18 then placed into categories (i.e., underweight, normal weight, overweight or obese)	0.78
Meditation	The images were coded to include if the person/people were in a meditative posture	A meditative posture included sitting, in lotus, eyes closed or hands in mudra. This includes the other limbs of yoga (not exclusively asana), including <i>Dharana</i> (state of meditation), <i>Ptayahara</i> (withdrawal of the senses), and <i>Dharana</i> (intense focus), suggesting that one is adhering to the traditional teachings of yoga ^[7]	0.92
Setting	The image was coded to include if the person was outdoors, indoors, or not able to be determined	Similar to Cowans, ^[4] photographs taken outdoors would include in a city, in a park or in a backyard. This category is to assess the images' consistency with traditional yogic instructions that states yoga should not be practiced in the open air. ^[6] This is not universal to all yogic teachings and was only emphasized by Jois ^[6]	0.84
Spirituality	Images were coded to include if a spiritual symbol was present	Spiritual symbols included the OM sign, god/goddess such as Buddha and Ganesha, tree of life, mandala, hamsa, lotus, or mala, chakra symbols in the environment, as an overlay on the photograph itself or on body of people/person present in the image (tattoo, clothing, and jewelry). ^[11,12] The presence of these symbols may be predictive of a deeper yogic practice, aside from asana being a form of exercise and fitness ^[13]	0.79
Motivation	Images were coded based on the overall theme of its contexts, in an attempt to understand the motivation behind the author's self-presentation in their posts ^[8]	Photographs were coded and put into four different categories: inspiration (i.e., encouraging their followers to try a pose, how to fit yoga into their daily schedule); instruction (i.e., caption including physical/muscle cues, how to maintain posture, breath pattern); promotion (i.e., captions including deals for workshops, retreats, teacher trainings); and spiritual guidance (i.e., mentioning eight limbs of yoga, teachings of the Yoga Sutras, quotes from recognized Yogis, Buddha)	Inspiration 0.85 Instruction 0.80 Promotion 0.89 Spirituality 1.00

BMI-O=Body mass index for obesity

64,255 words/phrases, can be seen in Figure 2 (RQ 1). The image (RQ 2) characteristics are presented in Table 3.

Discussion

The present study examined the relationship between #yoga images on Instagram and whether the core principles of yoga, experiencing contemplative states of consciousness and spirituality,^[2] were being communicated online. Within the current #yoga dataset, prominent themes emerged within the comments and conversation associated with

#yoga posts on Instagram. The most common words associated with #yoga included #fitness, #gym, #workout, and #fit, suggesting that the online depiction of #yoga is based around the physical benefits^[5,6] (e.g., being thin/fit from *asana*) as opposed to the more in-depth limbs of yoga, such as meditation or *dhyana* that leads one to experience yogic enlightenment.^[2-4] According to the CPM, both the author/sender and the audience/receiver may be perpetuating the message of physical benefits based on the most commonly used words (as opposed to spiritual

Table 2: Most commonly used words associated with #yoga (n=35,000)

Tags	Number of messages	Number of instances
#yoga	21,876	22,216
#fitness	5491	5648
Yoga	3659	5197
#yogaeverydamnday	3896	3951
#love	3526	3630
#yogi	3110	3153
#meditation	2940	2995
#yogalife	2249	2296
#yogalove	2336	2384
#namaste	2414	2,450
#yogainspiration	2361	2405
#motivation	2043	2074
#yogachallenge	1860	1904
#yogini	1658	1681
#health	1910	1977
love	1845	2287
#gym	2110	2176
#workout	2132	2182
#yogagirl	1889	1926
#fit	1979	1999

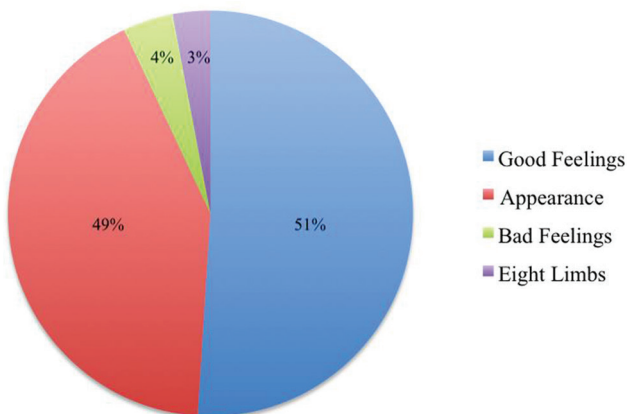


Figure 2: Results for #yoga content categories: good feelings (n = 32,747), appearance (n = 30,351), bad feelings (n = 2454), and eight limbs (n = 1703)

enlightenment), thus supporting the CMC theory of using Instagram as a valuable source of communication that may be changing one’s beliefs and attitudes toward the practice of yoga.

Moreover, popular/emerging themes/text around #yoga suggested that good feelings and appearance were the largest content categories. Past research suggests that exercise and stress relief were the initial reasons for practicing yoga with spirituality playing a larger role with continued practice.^[5] Further, the current data support previous work that practicing was associated with the societal values of reducing stress and feeling positive as well as increasing beauty and muscularity.^[5,6] The online community also may value the physical benefits of yoga as

Table 3: Unique #yoga image characteristics (n=100)

Image characteristic	Category	Frequency, n (%)
Gender of people	Woman	89 (89)
	Man	9 (9)
	Unknown	2 (2)
Number of people	1	85 (85)
	2+	15 (15)
Minimal clothing	No	30 (30)
	Yes	70 (70)
Yoga experience	Not advanced	51 (51)
	Advanced	49 (49)
Body size	Underweight	68 (68)
	Normal weight	25 (25)
	Overweight	7 (7)
	Obese	0
Meditation	No	94 (94)
	Yes	6 (6)
Setting	Inside	57 (57)
	Outside	41 (41)
	Unsure	2 (2)
Spiritual symbols	No	95 (95)
	Yes	5 (5)
Motivation inspiration	No	92 (92)
	Yes	8 (8)
Motivation instruction	No	98 (98)
	Yes	2 (2)
Motivation promotion	No	83 (83)
	Yes	17 (17)
Motivation spiritual	No	97 (97)
	Yes	3 (3)

an exercise rather than a spiritual practice,^[5] as the eight limbs were almost nonexistent within the content analysis. Finally, similar themes/patterns emerged within a subset of #yoga images. There were virtually no spiritual symbols present within the #yoga images (n = 5; 5%) or those in a meditative postures (n = 6; 6%). Further, the highest motivation was promotion (n = 14; 17%), suggesting that images may have a focus of gaining a profit (i.e., sponsorship of yoga companies)^[4,6] as opposed to sharing the spiritual teachings associated with the eight limbs of yoga.^[1]

Limitations and future considerations

The current study is not without limitations. The study’s sample (n = 100) of #yoga images was small, relative to the large online content (i.e., there were over 60 million images tagged with #yoga as of January 02, 2019). The current study suggests that the online conversation and community on Instagram may be highlighting the trend that yoga is becoming a source of fitness and well-being. Yoga may further improve one’s health physically; however, it is not congruent with the initial intent of the practice to increase one’s spirituality and consciousness.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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