

Mapping Digital Wellness Content: Implications for Health, Science, and Political Communication Research

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Despite the increasing popularity of wellness on social media, there is little empirical study of its content or audiences. This study provides descriptive information of prevalent themes in wellness content and the composition and views of its audiences. Using structural topic modeling to identify central themes #wellness content on Instagram (N = 544,377 posts), we find that while much content appears to promote desired health behaviors (e.g., quality sleep), other topics concern unsubstantiated claims that are often driven by commercial incentives. Nationally representative survey data of U.S. adults (N = 970) further reveals that women, more liberal, and younger people are more likely to seek and see wellness content. Those who actively seek wellness content are both more trusting of science institutions and have less accurate health beliefs compared with those who are inadvertently exposed to wellness content. Though wellness has not received a great deal of scholarly attention, this description sheds light on the relevance of wellness to central questions in communication disciplines concerning expertise, (mis)information, and institutional trust.

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The popularity of wellness content in social media merits further empirical examination as such content may have important benefits and harms that disproportionately affect women and young people.

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Online wellness content is diverse and contradictory. Companies and influencers market nutritional supplements, yoga retreats, and cosmetic LED-light treatments, while other wellness content focuses on meditation and mindfulness, anti-consumerism, and the importance of treating mental health. In this 1.5 trillion-dollar industry (Callaghan et al., 2021), wellness can be both empowering and exploitative, promoting both evidence-backed practices and dangerous pseudoscience. The exploding popularity of wellness on social media demands systematic investigation, yet public and scholarly analysis often ignore these interesting contradictions to either demonize or dismiss wellness. In news and popular culture, wellness is often discussed as a pathology of irrational beliefs held by under-educated celebrity sycophants, with occasional sexist overtones (e.g., Brodesser-Akner, 2018; Commons, 2019). Research in science and political communication has mostly overlooked wellness, despite its relevance to disciplinary questions about expertise, misinformation, and institutional trust. Failure to rigorously investigate wellness will not only result in inaccurate generalizations and misunderstandings of such content, but also in failure to see potential harms and benefits, especially those relevant to women and young people.

This study offers basic descriptive information about wellness content in social media and its audiences. First, we examine content with the hashtag “wellness” from Instagram, which is a popular platform for wellness content (Chan, n.d.). Instagram’s emphasis on visual media has fostered the rise of wellness influencers, who often use idealized and beautiful imagery as evidence for their advice and practices (Chan, n.d.). We then examine cross-sectional survey data to provide descriptive information about

who sees wellness content in social media, who actively searches for wellness content in social media, and what views are prevalent among these audiences. The results reveal nuanced and at times contradictory findings concerning trust in experts, misinformation, commercial promotion, and personal responsibility for health.

To explain why empirical investigation of social media wellness is important, despite having been largely overlooked or dismissed by researchers to date, we discuss three ways in which wellness on social media is of direct relevance to the fields of science, risk, health, and political communication.

First, wellness on social media is a space where audiences learn about health, science and technology, often through their application in commercial products. For example, in skincare and fashion content, audiences can learn about applications of nanotechnology in sunscreens and workout clothing, as well as potential environmental risks (Frey, 2020; Hiram, 2019; Commons, 2019). Digital wellness content may be a particularly important source of information for those who otherwise do not seek mainstream news and information about scientific topics (de Bruin et al., 2021). In other words, people may come to wellness content through interests in topics like beauty or fitness and may then learn substantive information about emergent technologies, health and environmental impacts, or regulatory policies.

However, this information is not solely disseminated by experts or unmotivated actors. Influential opinion leaders and groups have spread unsubstantiated claims about health risks of technologies like GM foods and chemicals in food, cosmetics, and medicine (Cartwright, 2022; Stecula et al., 2022; Brennen et al., 2020; Phelan, 2021). In addition, it may be difficult for audiences to distinguish between authentic perspectives and promotional or sponsored content (Boerman & Van Reijmersdal, 2016). Competing claims and misinformation about science and technology in wellness content may lead to uncertainty and skepticism, and potentially mistrust toward experts and institutions who create them (Chinn & Hart, 2022). Given that initial impressions of novel technologies

are important for building public support or opposition (Frewer et al., 1998), it is important to attend to where people encounter information about health, science, and technology to better understand what and how people learn about these issues.

Second, wellness on social media offers a space in which audiences can engage with health and science experts outside of institutional settings. Increasingly, a wide range of experts use social media to make scientific research and information accessible to broad audiences interested in health and wellness (Jennings, 2019). This provides an opportunity for individuals who may not have reliable access to healthcare to learn from medical professionals, sleep experts, dermatologist, nutritionists, psychiatrists and therapists, and physical therapists. The popularity of content in which medical doctors and experts react to media and popular trends is a testament to public interest in their expert opinions and the role these experts play in debunking false and unevidenced claims (Paz, 2022). In this way, wellness social media spaces can play a role in addressing gaps in access to health care and other knowledgeable professionals.

At the same time, the affordances of social media platforms that enable experts to share knowledge with a wider audience also empower non-experts to share their own knowledge and experiences. Much of this lay information is helpful and beneficial, and some it is ineffective but benign, yet some of the information found in these spaces is harmful, incorrect, and exploitative. There are strains of this content that are explicitly anti-expert and anti-institutional, bordering on conspiracy promotion (Bunch, 2021). Many non-experts have become extremely influential in the digital wellness community in part by cultivating cynicism and distrust towards medicine, science, and regulatory institutions, and positioning themselves as alternative experts (e.g., Frenkel, 2022). Because of this, unsubstantiated claims are often circulated alongside anti-expert themes, and appeals to intuition and anecdote are promoted over research and evidence. For example, those opposing childhood vaccinations often appeal to maternal instinct and intuition as superseding the evidence of medical science (Kata, 2012; Bradshaw et al., 2020; Carrion, 2018). In sum, wellness communities in social media provide individuals

the opportunity to interact and engage with health and scientific experts, but messages that promote distrust and cynicism toward research-based knowledge also circulate in these spaces.

Finally, social media wellness spaces aid in cultivating group identities, community, and belonging in ways that have important ramifications for both health and political outcomes. Wellness spaces on social media offer opportunities to resource information, build social support, and empower advocacy in ways that are particularly useful for those marginalized by health, science, and political institutions. Online health communities, both administered by health professionals and organically occurring, are used to fulfill patients informational and emotional needs (Nambisan, 2011). The combination of information and social support found in these spaces can be particularly important to individuals with stigmatized or misunderstood conditions (Yeshua-Katz & Hård af Segerstad, 2020), as well as members of marginalized communities and those with lower socio-economic status (Gustafson et al., 2001). Health and wellness communities on social media can provide spaces for communities who experience discrimination in institutional systems to gather resources and develop tools to advocate for their health (Lober & Flowers, 2011). In many cases, these communities are associated with important pro-social outcomes like correcting misinformation, empowering individuals, and achieving better health outcomes.

Of course, such communities can also foster dangerous beliefs and cynicism towards expert knowledge (Bradshaw et al., 2020). Connection with like-minded others online can fuel beliefs that one's views are more widespread than they are in reality (Kata, 2012). This perceived social support may lead to more vocal expression of extremist views, which is reflected in observations of wellness spaces being fertile ground to conspiracies like QAnon (Bunch, 2021). Wellness social media spaces facilitate group connection and a sense of belonging in ways that are likely to strengthen effects of social influence and persuasion online, but these social bonds may also be used to advocate for anti-social causes and spread dangerous information.

Despite these areas of relevance and increasing public interest, wellness has seen little empirical examination in science and political communication disciplines. Wellness is often dismissed as frivolous or ridiculed by scholars and the broader public alike (Brodesser-Akner, 2018), which raises a larger concern that despite health, science, and technology being central to any conceptualization of wellness, it is not considered a serious site of research because its audience is largely women. Much of the criticism or concern about wellness contains explicit derision for the women who consume such content (e.g., O'Neill, 2020; Commons, 2019; Williams, 2022). It is well known that the world has a long history of dismissing the health, bodies, and minds of women (Cleghorn, 2021), and it continues in the present day. In the U.S. today, women and marginalized groups frequently have their concerns dismissed and their questions shrugged-off by well-meaning healthcare providers (Cleghorn, 2021; Thompson et al., 2022; Hintz, 2022) and face mistreatment during routine procedures (Vedam et al., 2019). Research on women's health is underfunded and often considered a specialty field (Bird, 2022), while pediatric and maternal mortality are actually increasing in the U.S. (Hoyert, 2021; Woolf et al 2023). Thus, while women and minorities who seek alternative remedies in wellness content are often described as irrational or easily influenced, seeking information and social support may be a prudent response to the failures of institutions to provide safe, effective, and respectful treatment, particularly in the U.S. where access to healthcare is not universal.

As social media wellness content becomes increasingly popular, it also forms communities where people learn health and science information and construct ideas about what it means to be well and healthy. Yet this mostly occurs outside of institutional expertise and may shape attitudes about health and science related institutions, policies, and technologies. Overlooking social media wellness content may not only result in inaccurate generalizations of such content, but also may result in failure to see potential harms and benefits, especially those relevant to women and younger people, who are presumed to be the majority of creators and consumers of wellness content. By mapping

social media wellness content and providing information about wellness content seekers, we offer important descriptive information for health, science, and political communication subfields beginning to examine wellness content and culture on social media. This paper has two aims: (a) to describe the topics in wellness content on Instagram, a popular platform for such content, and (b) to describe the demographic make-up of those who seek wellness content and their correlated beliefs about science, health, and medicine. In doing so, it offers unique insight into directions for future research and foundational descriptive data to underly investigations into associations between wellness social media and science, health, and political outcomes.

Describing #Wellness Content on Instagram

Methods

Social Media Data. The first data we describe is one year of Instagram content with the hashtag “#wellness” to reveal the prominent topics and messages that constitute wellness content on social media. We chose to focus on Instagram content for two reasons. First, wellness influencers regularly use Instagram to share content, grow followings, and market products (Chan, n.d.). Second, our survey findings (described below) supported this assumption, revealing that among different platforms, social media wellness seeking was most strongly correlated with Instagram use, followed by other visual social media platforms like Pinterest and Snapchat (see Supplemental Information). Instagram posts including “#wellness” were collected via CrowdTangle, a Meta-owned API, which claims to supply researchers with free access to the population of publicly available content at the time of data collection. Posts which have been removed or made private prior to data collection either by the platform or the user cannot be collected and thus were not included in the dataset. We collected all available posts (N = 544,377) made between September 2020 and August 2021, this being the six months before and after survey data was collected and reflecting the period of initial COVID-19 vaccine distribution in the United States (Figure 1).

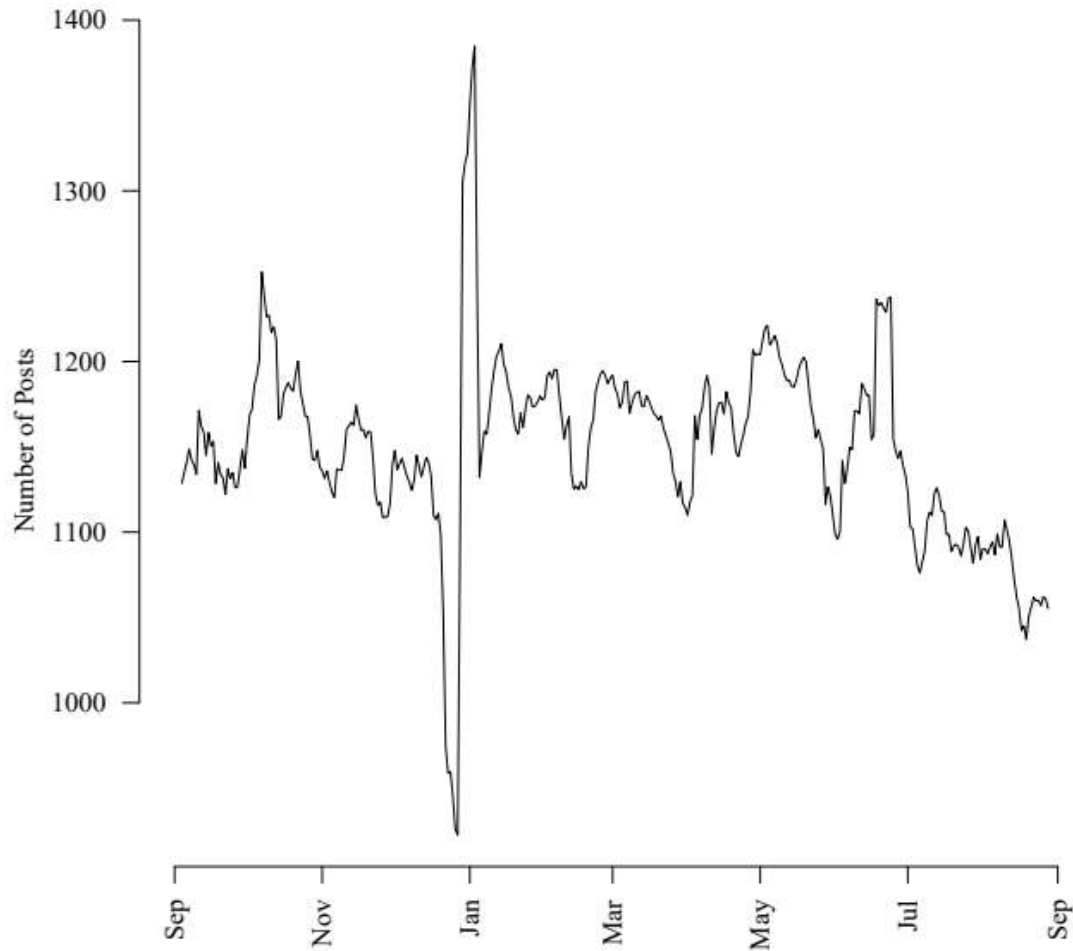


Figure 1. Number of #Wellness Instagram Posts in our Dataset, over Time.

Analysis. To evaluate the content of our dataset, we employed structural topic modeling. In our data set, each post was an observation which included the account name

of the poster, date and time it was posted, a link to the post and to the image or video, the number of total engagement (likes and comments), and a description of the image or video. Finally, each observation included the text of the caption that accompanied each post, and it is this data that we were primarily interested in for our analysis.

To extract the content and topics from the Instagram captions, the data first needed to be cleaned. We first used the `cld2` package in R, which uses Google's compact language detection tool, to detect posts in English, which comprised 79.18% of posts collected. We removed any posts that were not flagged as English language posts. We then removed any URLs, punctuation, numbers, and hashtags from each caption as well as stop words from the text. Stop words are common words that are insignificant to the results, such as "a", "by", and "to". Finally, we stemmed the remaining words to their root forms (e.g., "waited" and "waits" become "wait"). We note here that using stemmed text in a STM is not without downsides (see Schofield and Mimno, 2016). Given the size of this corpus, however, stemming was appropriate, and we used the recommended Porter stemmer. Our resulting dataset was 419,495 posts.

We then ran a Structural Topic Model (STM) on the cleaned caption of each post. A STM is very similar to LDA or CTM but allows one to use document-level metadata, notably date, as a predictor of topics (Roberts et al, 2019). A STM, therefore, functionally allowed us to control for the changes in topics over time. We used the default settings on the STM and spectral initialization (Mimno & Lee, 2014; Roberts et al., 2019). The spectral initialization algorithm is a useful tool for large datasets though we included some optimization tests in supplementary information where we varied the metavariables within the model. To allow for variations over time, we used a cubic spline of date as a predictor and the resulting model found a total of 69 topics. The full list of topics, along with frequent and unique words, are available in a table in the appendix (Table S1). In addition to inspecting the most frequent and unique words for each topic, we also employed research assistants to qualitatively inspect the 100 posts most associated with topics of substantive interest. This verified initial topic designations and clarified topics

that whose central themes were unclear from initial inspection of the most frequent and unique words associated with each topic.

Results

First, a striking result was the prominence of topics related to promoting content, products, and engagement. Of the 72 topics, 21 were identified as explicitly related to commercial promotion.

We identified several topics relating to fitness and weight loss (topics 3, 18, 21, 29, 54, 57, 63, 69), healthy eating (6, 7, 12, 22, 42, 60, 62), beauty (9, 20, 23, 34, 35, 41, 44, 67), and strategies or products to better physical health conditions (40, 46). There were also many posts about mental health (11, 25, 30, 33), motivation (4, 5, 71), self-care (26, 27), and sharing positive messages or promoting a positive mindset (10, 13, 14, 15, 48, 58, 68). There were two topics containing keywords related to COVID-19 (17, 66).

We present three figures showing the substantive prevalence of topics discussing themes related to physical health, mental health, and COVID-19 over the 12-month period in Figures 2-4. Each figure shows what proportion of all content each of the topics make up (with proportion of content represented on the y-axis). It is important to note that while these proportions are small (as to be expected), for a large and diverse set of content creators over an extended period of time we find meaningful differences and trends.

Topics concerning physical health or the appearance of health remained at fairly consistent levels in #wellness Instagram content between September 2020 and August 2021 (Figure 2), perhaps with the exception of increasing weight loss content prior to summer (topic 3). These topics characterized health as self-improvement marked by external appearances and alignment with ideal beauty standards. There was frequent sharing of workout routines, weigh ins, and diets, as well as beauty products and

cosmetic treatments (surgical and non-surgical). There was a great deal of content about supplements and natural ingredients to boost health (e.g. “the wider the array of plant foods in your day the greater breadth of nutrients...like an edible medicine cabinet”), often making claims about specific health benefits and conditions (e.g., “promotes healthy...reduces pain and inflammation, purifies the blood, improves circulation to the joints, and helps rebuild cartilage”). Some posts reminded audiences about medical checkups and screenings (e.g. “Early detection saves lives. Don’t think twice get screened). Throughout posts about diets, workouts, beauty, and medical conditions, there was frequent discussion of natural solutions and clean ingredients (e.g., “Who else turns to holistic herbal remedies?” “Don’t forget to pack our natural deodorant”) and the physical benefits of exercise, diets, and supplements (e.g. “Don’t forget it also makes your skin hair and nails you look great too”).

Similarly, we saw little variation over time in the prevalence of mental health topics (Figure 3). These posts commonly discussed issues of stress, burnout, or fatigue, though some also concerned depression, anxiety, and substance abuse. They had an overwhelmingly positive tone, advocating for self-care and positive thinking to resolve mental health struggles (e.g., “in this interview we talk about election sanity or lack thereof and trainable mental skills and practices that can give us a bit of a boost right now”). Affirmations were common expressions of motivation and support (e.g., “sometimes you have to let life turn you upside down so you can learn to live the right side up”). Many emphasized the power of positive thinking to change one’s circumstances (e.g., “when you change the way you look at things the things you look at change”) or even physical appearance (e.g., “clear minds can have a significant positive impact on the health of your skin”). In these ways, a positive mindset was depicted as instrumental to optimize one’s life and health.

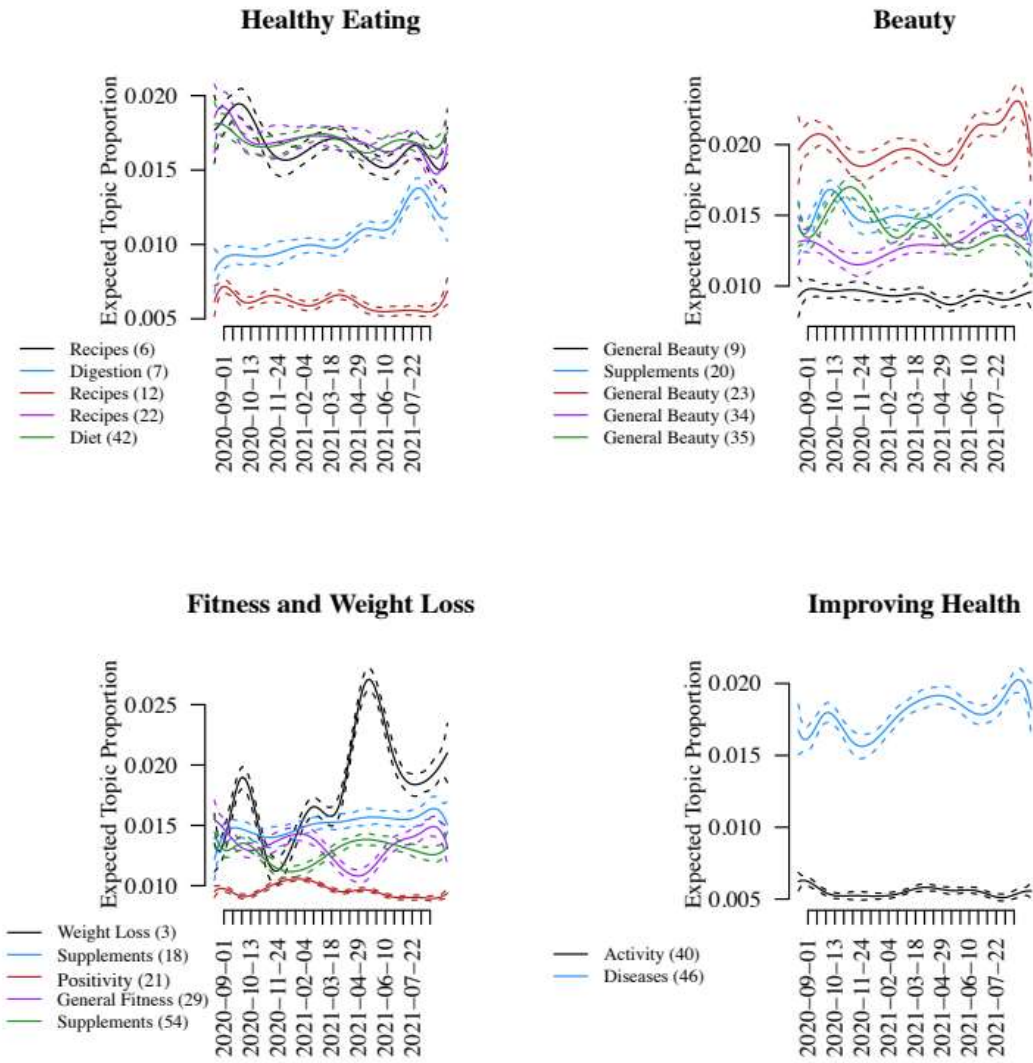


Figure 2. Prevalence of Physical Health Topics over Time in #Wellness Instagram Content

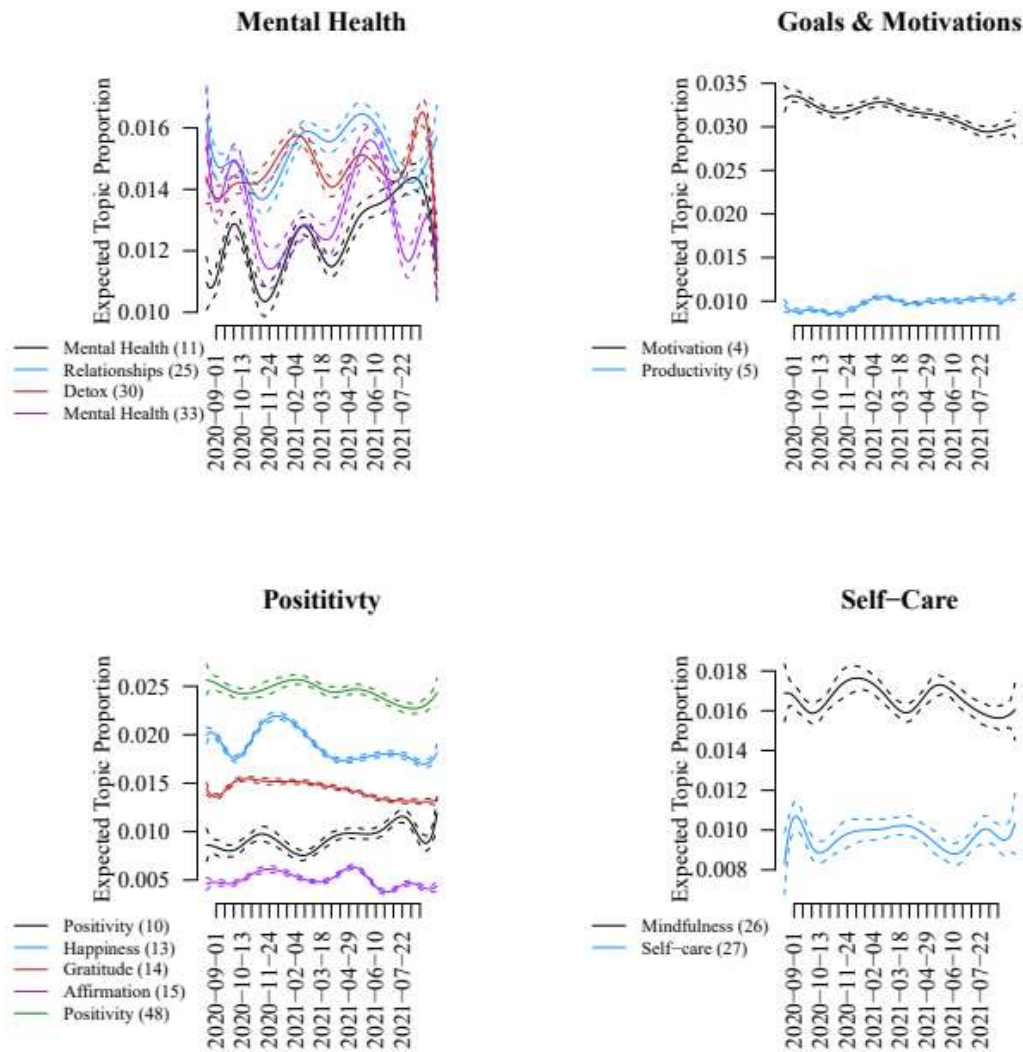


Figure 3. Prevalence of Mental Health Topics over Time in #Wellness Instagram Content.

We identified two topics that discussed COVID-19 (Figure 4). Topic 66 included a mix of posts expressing support and opposition to expert recommendations concerning vaccination, as well as other medical issues like cancers. Some of these posts expressed

distrust of doctors, big pharma (e.g., “the talking heads on the and big pharma won’t tell you these things because it does not generate money for them”), and western medicine (e.g., “think long and hard about doing chemotherapy and falling prey to the western model of cancer treatment”) in favor of natural solutions like CBD, alkaline diets, and colloidal silver. This topic varied a little over time, peaking in the fall of 2020 and April-May 2021, which may coincide with COVID-19 vaccine announcements and rollout to the general public in the U.S. Topic 17, in contrast, reflected conversations about lifestyle aspects COVID-19 lockdowns, including activities for children while they were out of school and tips for managing stress. This topic had little variation in prevalence over time.

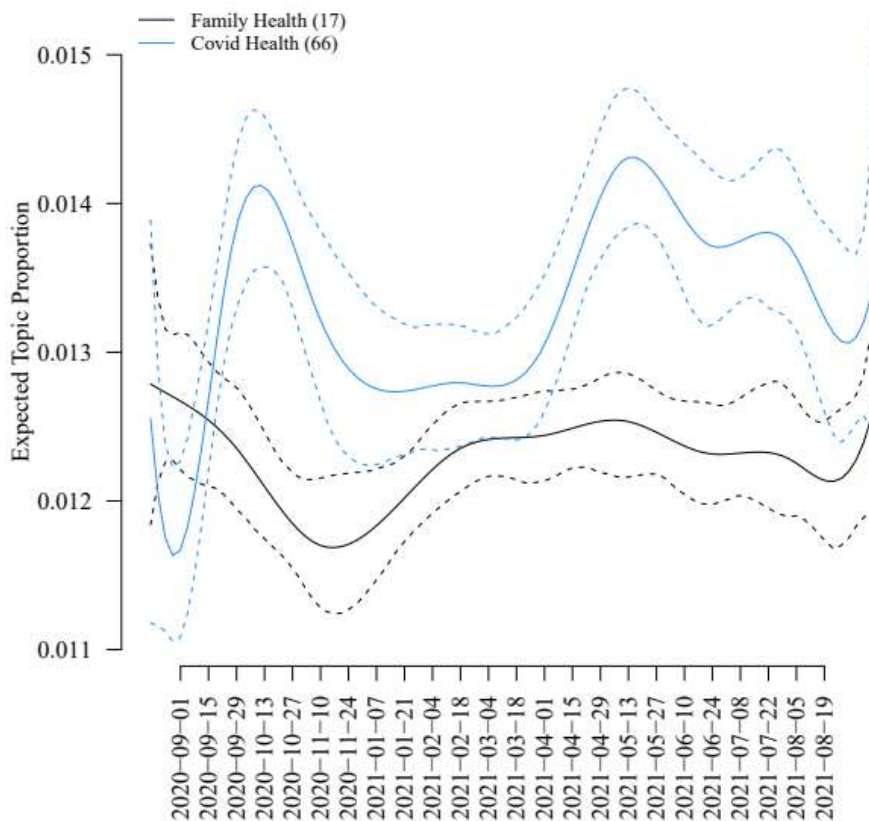


Figure 4. Prevalence of COVID-19 Topics over Time in #Wellness Instagram Content.

Across these diverse topics, expertise was frequently depicted in the style of an infomercial – inviting audiences to learn about health “secrets” and insider tricks if they engaged with the poster by following them, going to their website, or making an appointment. Health advice was often presented as novel and specialized knowledge that was either not well known or actively suppressed by institutional experts, and ranged from mundane to dangerous. For example, the left panel in Figure 5 is a post that claims to “teach people how to stop making cancer” by strengthening the immune system with raw, vegan diets. In addition, it was common for posts to use scientific jargon (correctly or incorrectly) to describe health benefits (see right panel, Figure 4). Though these marketing tactics may affect perceptions of institutional and alternative expertise, we saw little evidence of conspiratorial recruitment or strategic disinformation campaigns. These findings are important to attend to, given that major topics (1, 36) and cross-topic themes revealed a focus on women who may be disproportionately exposed misinformed health claims and messages expressing skepticism of institutional expertise in this content.

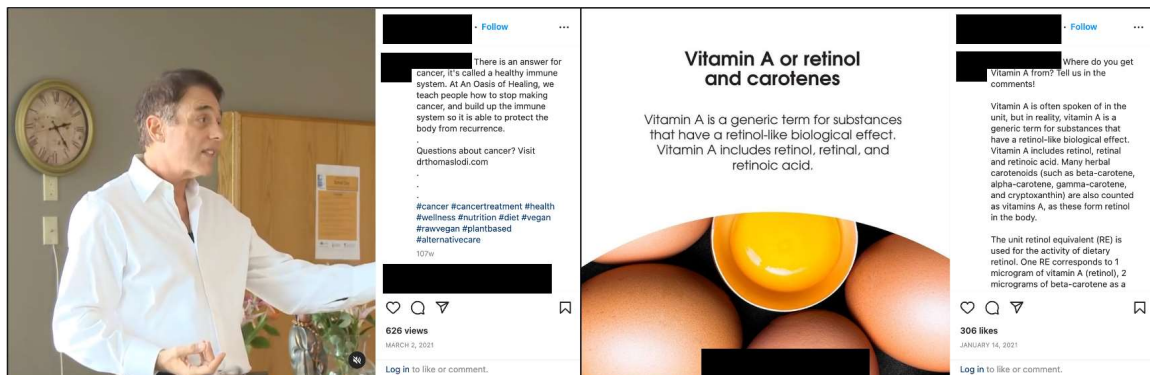


Figure 5. Example Wellness Posts.

Describing #Wellness Content on Instagram

Methods

To explore wellness audiences, we used data collected from the second wave of a two-wave national online survey of U.S. adults collected in March 2021. The survey was fielded by YouGov using their panel of adult respondents in the U.S., which used a matching approach to generate a sample that is reflective of the general demographic of the U.S. population in terms of age, gender, race, education, and income. The second wave of the survey was collected between March 2-8, 2021; after removing participants who failed an attention check, the final sample included 970 people in Wave 2. This sample was 55% women and 68% white. The average age was 52.6 years old and median household income was between \$50,000-\$59,000, and 47.6% had at least a two-year higher education degree. We additionally measured political affiliation on a seven-point scale with 1 being “strong Democrat” and 7 being “strong Republican” ($M = 3.62$, $SD = 2.16$). The supplemental information file includes additional information about the sample and measures.

Our main variables of interest related to wellness information seeking and exposure in social media. We asked how much wellness content respondents see in social media, with 1 being “none” and 5 being “a lot” ($M = 2.76$, $SD = 1.19$). We also asked how often they search for wellness content in social media, with 1 being “never” and 5 being “very often” ($M = 2.03$, $SD = 1.11$). These variables were correlated ($r = .52$, $p < .001$). For more simplified descriptive information, we created categorical versions of these two variables with three categories. For wellness content exposure, we found that 39% did not regularly see wellness content, 49.9% did see at least some wellness content, and 11% did not know what wellness content meant. For wellness content seeking, we found that 61% did not seek wellness content, 30.6% did at least sometimes sought wellness content, and 8% did not know what wellness content meant.

Finally, we asked an open-ended question about what comes to mind when respondents think of “wellness.” These responses were then coded by trained human coders who found that 47.8% of people associated wellness with holistic mind and body health and 21% associated it with physical health and fitness. A small number of

individuals associated wellness with spirituality (1.5%), mental health (4.5%), or with aspirational or consumerist qualities (4.0%). Another 9.7% expressed anti-wellness views, like calling wellness “PC nonsense” or “thin white grifters,” and 11.3% did not respond to the question (Figure 6).

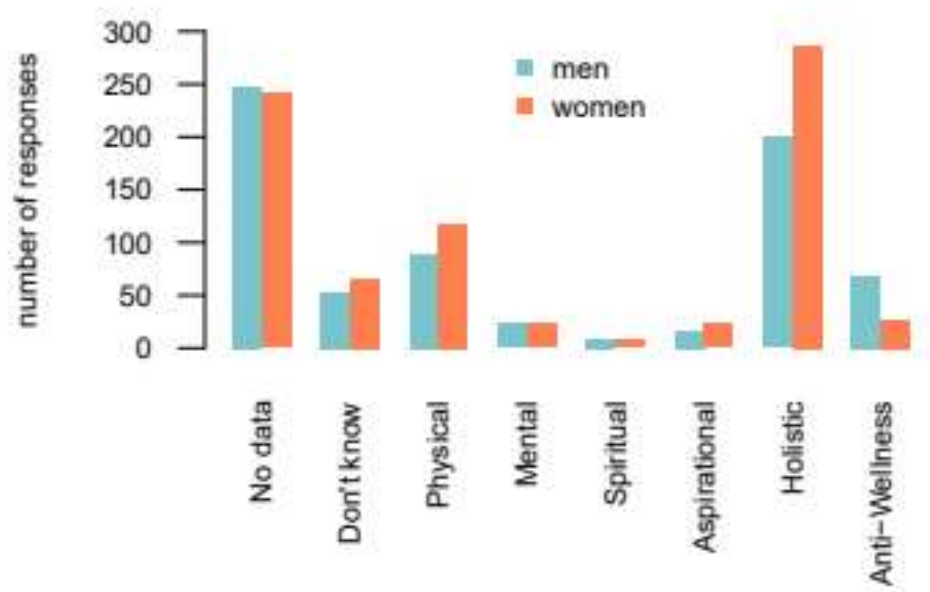


Figure 6. Open-Text Survey Responses Defining Wellness.

Results

We first examined the relationship between demographic information and wellness content. We found that 57.3% of women saw wellness content compared to 41.5% of men, and 39.3% of women searched for wellness content compared to 20.7% of men. However, there was little distinction among different racial identities. About half of each racial identity was regularly exposed to wellness content on social media, and between 30-40% of white, black, and Hispanic identifying individuals sought out wellness content. Age had a small negative correlation with both exposure to ($r = -.13, p < .001$) and seeking ($r = -.15, p < .001$) wellness content; education had only a weak

correlation with exposure to wellness content ($r = .09, p < .01$). Political party affiliation had no correlation with exposure, but had weak, negative correlation with seeking ($r = -.10, p < .01$), suggesting that Democrats may have been more likely to seek wellness content.

We next examined how the attitudes and beliefs of those who were exposed to or sought wellness content. First concerning attitudes, we considered two measures related to naturalness, preference for natural (e.g., “In general, I prefer natural products over anything humans have created”) and aversion to tampering with nature (e.g., “Human beings have no right to meddle with the natural environment;” Raimi et al., 2020), in addition to conspiratorial thinking (e.g., “Much of our lives are being controlled by plots hatched in secret places;” Strömbäck et al., 2022) and belief superiority (e.g., items ask to what extent one’s views on different topics are “No more correct than other viewpoints” to “Totally correct (mine is the only correct view point);” Raimi & Jongman-Sereno, 2020). Exposure to wellness content was not correlated with any of these attitudes. Seeking wellness content had a small, positive correlation with preference for natural ($r = .17, p < .001$) and aversion to tampering with nature ($r = .12, p < .001$), but had no correlation with conspiratorial thinking or belief superiority (Figure 7).

We also examined how exposure to or seeking wellness content correlated with trust in science, government, news media, and social media. Exposure to wellness content was only weakly correlated with trust in science ($r = .09, p < .05$), government ($r = .07, p < .05$), and news media ($r = .08, p < .05$), and had a small positive correlation with trust in social media ($r = .19, p < .001$). Seeking wellness content also had a weak correlation with trust in science ($r = .10, p < .01$), but had a small positive correlation with trust in government ($r = .19, p < .001$) and news media ($r = .17, p < .001$). Seeking wellness content has a moderate correlation with trust in social media ($r = .30, p < .001$; Figure 8).

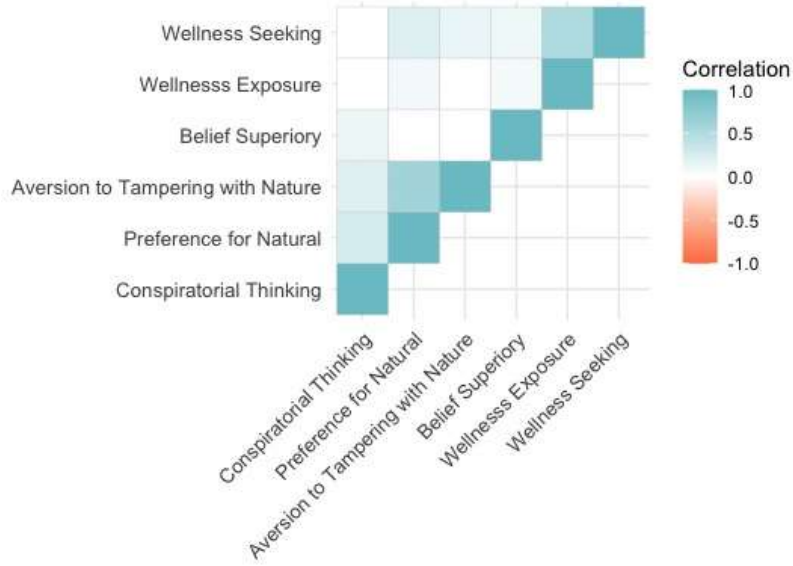


Figure 7. Correlations between Wellness Seeking, Exposure and Attitudes.

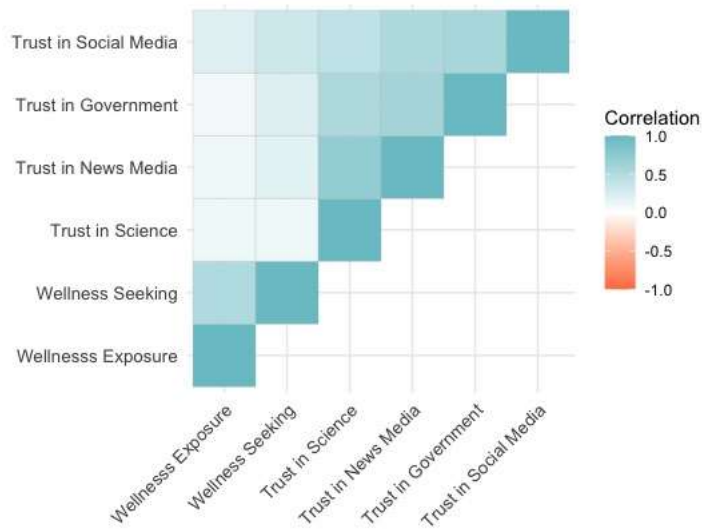


Figure 8. Correlations between Wellness Seeking, Exposure, and Trust.

For beliefs, we considered three measures, each containing five statements that respondents could indicate whether they believed them to be true or false; these included a measure of politically controversial science beliefs, medical folk wisdom beliefs (e.g., “White spots on one’s fingernails are indicative of a vitamin deficiency” Motta & Callahan, 2020), and unevidenced wellness beliefs (e.g., “Naturally occurring crystals can be used to enhance physical and mental health,” “Detoxes and cleanses can be a healthy way to reset your body and remove toxins”). Exposure to wellness content was not correlated with controversial science beliefs but had a weak, positive correlation with folk wisdom beliefs ($r = .08$, $p < .05$) and unevidenced wellness beliefs ($r = .10$, $p < .01$). Seeking wellness content was also not correlated with controversial science beliefs, but has a small correlation with medical folk wisdom beliefs ($r = .20$, $p < .001$) and unevidenced wellness beliefs ($r = .26$, $p < .001$). The correlations suggest that both exposure to and seeking wellness content were correlated with more factually inaccurate health beliefs, but the correlations were stronger for those who actively sought wellness content (Figure 9). See the supplemental information file for more information about the measures and results.

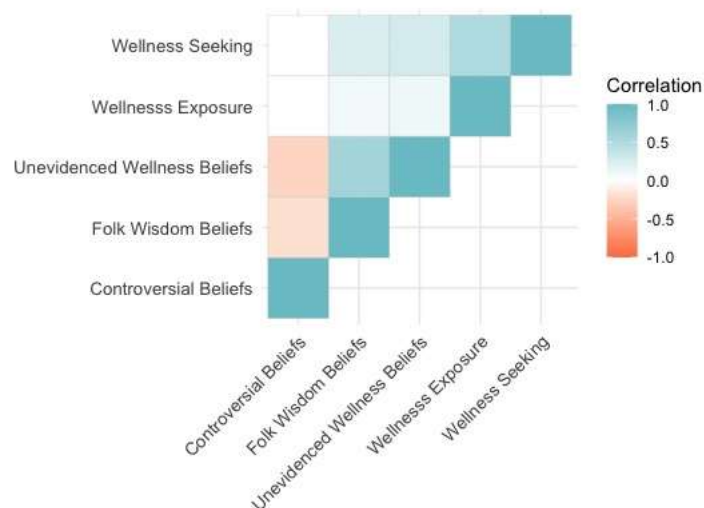


Figure 9. Correlations between Wellness Seeking, Exposure and Beliefs.

General Discussion

Drawing on #wellness Instagram content and survey data, we find complementary evidence for the definition of wellness as representing a holistic vision of health, encompassing physical, mental, emotional, and sometimes spiritual considerations. Survey data indicate that people have a broad and complex understanding of wellness, and our analysis of wellness content similarly suggests that messages on social media are diverse and substantial, but also heavily commercially focused and consumer oriented. The results have many important implications for communication research across subfields. Here, we focus on five broad findings, highlighting their significance and how they may help to inform future research.

First, it is evident that wellness is a highly gendered, but multinational phenomenon. We found that people seeking wellness content in the U.S. are likely younger, Democratic leaning women, but found no associations with race or religion, and this one English-language hashtag was used by people posting in many different languages. Several topics from the STM were specifically women-focused, though most of the topics included content and messages clearly targeting women audiences. This in itself merits further investigation. There are important questions about the cultural, political, and socio-economic reasons that women are interested in seeking wellness content and what perceived benefits it provides them.

As women face systemic hurdles in healthcare institutions and political challenges to healthcare access, particularly in the U.S., wellness social media spaces may provide important knowledge, support, and collective action benefits that have been overlooked by quantitative researchers. While popular narratives about wellness emphasize problematic and sometimes dangerous information shared in social media, the results from the STM indicate that much of the information shared in this space is practical and within the mainstream. It may be particularly important to investigate potential positive

effects of wellness content among individuals who lack access to health care or who actively avoid news media. On the other hand, the limited misinformation spread in these spaces may have disproportionate impacts on women. While these impacts may be minimal among those who are incidentally exposed to wellness content, we saw slightly stronger associations between misperceptions and those who actively seek wellness content. Clearly there are nuances in the relationships between wellness and misperceptions; further research should investigate differences between intentional and unintentional exposure with respect to the information one sees and how it is processed.

Second, a great deal of wellness content on social media appears driven by commercial motives, as identified through topics concerning sales, purchasing, and calls to engage with posts. There are obvious risks and harms associated with lay persons promoting health related products and practices for profit, especially when claims are made without research or evidence. However, another potential consequence is that commercialization may promote perceptions that health can be purchased through consumer goods (Commons, 2019). Messages promoting health products often present health as achievable through personal control and discipline (Pilgrim & Bohnet-Joschko, 2019), which may cultivate perceptions that health is a personal responsibility and moral behavior. While one's health is related to personal decisions and lifestyles, it is also dependent on structural factors, like access to affordable healthcare, preventative care, and education (Bailey et al., 2017; Crear-Perry et al., 2021). In the U.S., where access to healthcare is not universal, framing health as an individual responsibility can undermine support for structural changes (e.g., Lawrence, 2004), like policies increasing access to healthcare. Given the relevance of this issue in U.S. national politics, it would be worthwhile to explore how wellness content may be shaping political attitudes and preferences related to healthcare.

Third, wellness content tends to focus on positivity and empowerment. This type of messaging can have substantive benefits to individuals, from increased confidence and self-advocacy in medical situations (Attai et al., 2015; Basch et al., 2022; Treder et al.,

2022) to social support and connectedness (Myrick et al., 2016; Pavelko & Myrick, 2020). It also presents an opportunity to examine how positive affect and messaging may be related to misperceptions and misinformation. We found that actively seeking wellness content in social media was correlated with more false beliefs about health. Empowering and encouraging messages have been strategically used by actors spreading disinformation (Frenkel, 2021) and have a long history of exploiting the financially vulnerable in MLM scams (Wrenn & Waller, 2021). While research into misinformation has demonstrated how negative emotions like anger and fear can promote misperceptions and mobilize responses to political disinformation (Carnahan, 2022; Weeks, 2015), there is little work examining how encouraging, uplifting, and empowering messages may be used to spread misinformation, purposefully or otherwise.

Next, in recent years people have connected wellness communities to conspiracy theories and extremism (Baker, 2022; Bunch 2021; Burt-D’Agnillo, 2022; Hume, 2021), but our data from the STM and survey provide no descriptive evidence that this is widespread. With regards to wellness content, social media platforms have made efforts to remove extremist and conspiracy related health content during the COVID-19 pandemic (Heilweil, 2021), thus it is possible that Instagram removed such content that was initially posted with the hashtag “wellness” prior to our data collection in 2022. It is also possible that the popular perception of wellness as a hotbed of conspiracies is based on extreme examples that are not representative of most wellness content. Our survey data show that seeking and exposure to wellness content have no correlation with conspiratorial thinking or belief superiority and are instead positively correlated with institutional trust. This suggests that interest in wellness content related to alternative health, advice from non-experts, and information outside of mainstream institutions is not necessarily indicative of distrust of those institutions, even if it is associated with misinformation. As people are increasingly avoiding news media or relying on their peers to provide them with news information instead of news media (Goyanes et al., 2023; Newman et al., 2022), wellness communities in social media provide a context for future research to explore how people learn about issues related health and science outside of

institutional settings, and when this does and does not lead to distrust of mainstream institutions.

Finally, wellness content consistently glorifies beauty and nature. The results for the STM show that advice and health claims tend to be oriented towards physical manifestations of perceived health, like “glowing” skin and weight loss, with an emphasis on the superiority of natural products and remedies. There has been a great deal of research into how social media can facilitate social comparisons related to body weight and beauty (Perloff, 2014). Wellness content may be an interesting context in which some of these processes occur, as it frequently equates beauty with health (e.g., Pilgrim & Bohnet-Joschko, 2019). It is also an interesting context to examine how the naturalistic fallacy might impact moral judgements related to science and medicine. Future research should explore how wellness content may facilitate self-transcendent media experiences (Oliver et al., 2018), and what the implications might be when influential people promote the idea that wellness is achieved through the natural world and our connection to it. There are examples that such claims have led individuals to eschew modern medicine in favor of trusting nature, with tragic outcomes (Zadronzy, 2020). However, this type of content may also help to destigmatize natural bodily functions like menstruation and breastfeeding. Given that our survey data showed positive correlations between seeking wellness content and preference for natural, as well as aversion to tampering with nature, future research should explore how the connection between health, beauty, and nature in these communities may impact both pro-social and anti-science attitudes.

While these descriptive findings are intriguing, we want to emphasize that this work does not speak to causal associations. We caution against the temptation to interpret the patterns we see with respect to wellness seeking and misperceptions as directional. Our data cannot explain whether individuals seeking wellness content have prior misperceptions, or whether those misperceptions are cultivated through seeking wellness content, or whether some other process explains this relationship. Premature assumptions about the causal mechanisms behind the correlations we observe risks simplifying

potentially nuanced relationships and recommending paternalistic interventions. Thus, as we highlight the scholarly importance and potential implications of these spaces, it is important for further research to investigate the dynamics leading audiences toward benefits and harms in wellness spaces.

Despite its relevance to central disciplinary questions, wellness on social media has largely been overlooked by researchers or dismissed as apolitical, unscientific, or frivolous; though some have begun to highlight the cultural complexity of digital wellness spaces (O'Neill, 2020). As a result, we have limited understanding of the ways in which social media wellness content is associated with patterns of health beliefs, perceptions of expert and non-expert knowledge, and how these ostensibly apolitical spaces may inform political attitudes concerning healthcare policy or ingredient regulation. Investigating these outcomes and the processes by which they occur is paramount given the extent to which wellness cultures on social media pervade media diets, particularly those of women and younger people. Our descriptive results respond to current assumptions and offer a foundation upon which to build research agendas across communication sub-fields. They highlight the intriguing contradictions that exist in wellness content on social media and among its audiences, and reveal a rich space for health, science, and political communication researchers to explore questions concerning (mis)information, expertise, and institutional trust.

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Appendix

Additional STM Information

Figure A1 shows the diagnostics for our STM results using 20, 30, 40, 50, 60, 70, 80, 90, 120, and 140 set topics.

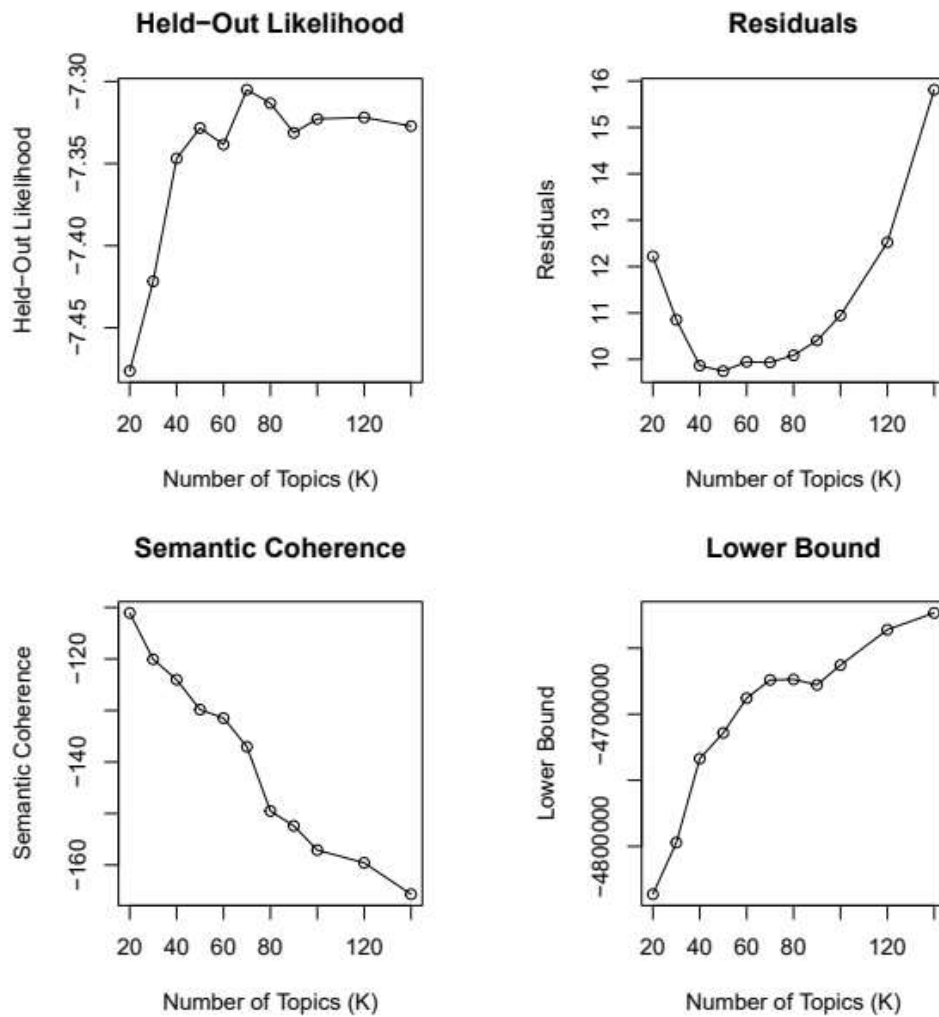


Figure A1. Diagnostic Values by Number of Topics.

Figure A2 shows variations to our STM model including changing the number of topics (lefthand side) as well as varying the alpha level at the selected number of topics from the spectral initialization (righthand side).

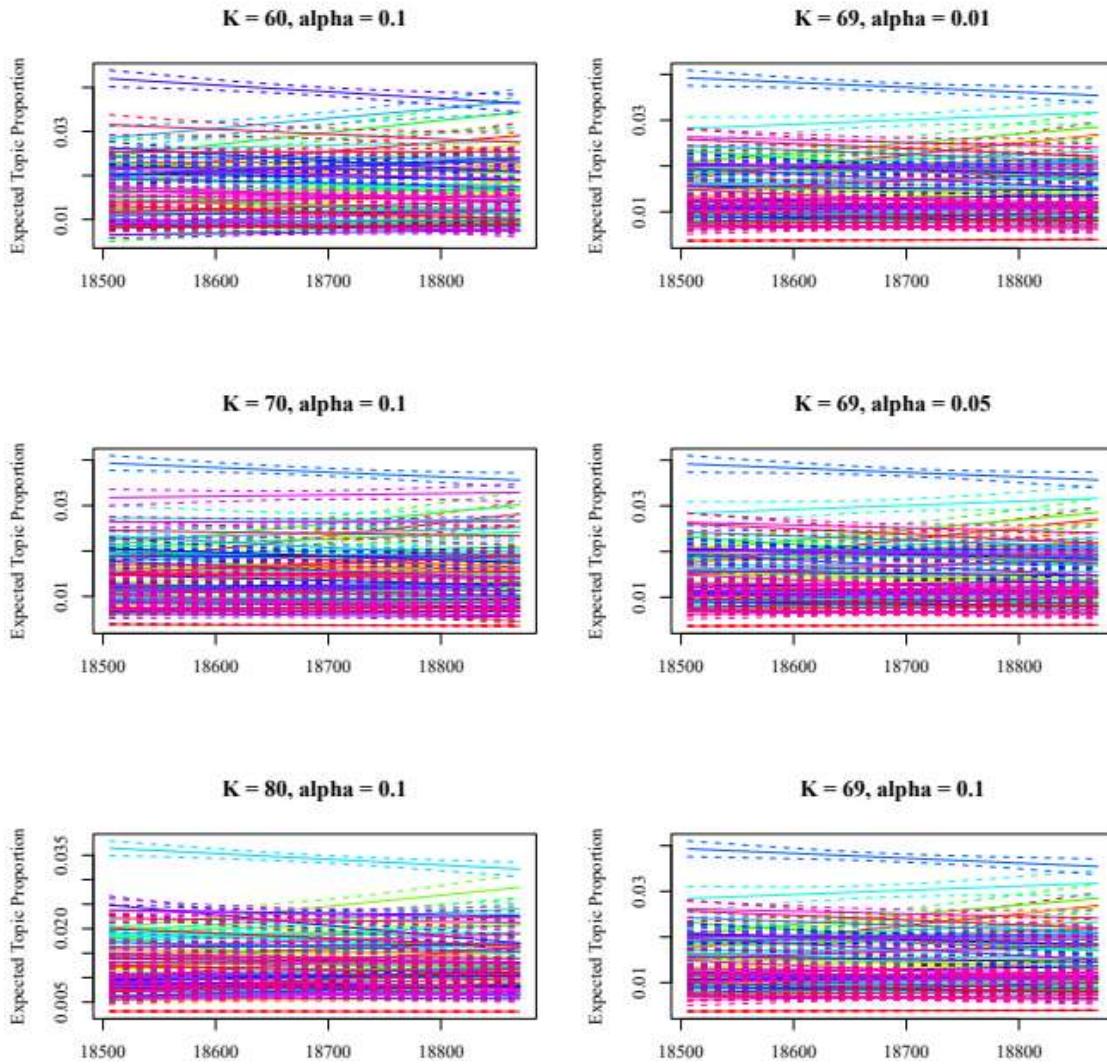


Figure A2. STM Diagnostics.

Table A1. STM Results, most frequent and most unique words associated with each topic.

#	Topic Name	<i>Associated words</i>							
1	Women's wellness	<i>frequent</i>	relax	massag	spa	experi	room	sauna	treatmen t
		<i>unique</i>	sauna	xheko	pedicur	hamma m	reflexol og	atzaro	clearligh t
2	Promotion	<i>frequent</i>	check	stori	coach	top	client	hit	success
		<i>unique</i>	keypox	kfxr	bodybyd errickllc	flawless darktan	fdtdrea	totalprof it	kapildp
3	Weight loss	<i>frequent</i>	weight	result	follow	loss	without	lose	gain
		<i>unique</i>	beast	psycho	geeta	simran	vohra	healthyli festylear zoo	deit
4	Goals & motivation	<i>frequent</i>	feel	thing	like	dont	just	your	think
		<i>unique</i>	isnt	mayb	seem	thing	sometim	think	scari
5	Goals & productivity	<i>frequent</i>	bodi	need	design	insid	whole	nourish	creat
		<i>unique</i>	bling	recovapr o	olimp	gessi	itovi	pandey	bodyexo
6	Healthy eating (recipes)	<i>frequent</i>	cup	powder	milk	chocol	mix	coconut	ingredi
		<i>unique</i>	granola	batter	unsweet en	pud	hazelnut	choc	pitaya

7	Healthy eating (digestion)	<i>frequent</i> <i>unique</i>	gut gut	digest manila	metabol theslimfirm	help prebiot	fat bulacan	probiot fitandhealthi	energi wowlifescienceindia
8	Promotion	<i>frequent</i> <i>unique</i>	program podcast	podcast spotifi	episod carer	listen brutal	talk podbean	discuss brutalirongym	platform weld
9	Beauty	<i>frequent</i> <i>unique</i>	hair shampoo	eye gum	mask condition	nail toothpast	teeth pollyn	smile toothbrush	babi frizz
10	Positivity	<i>frequent</i> <i>unique</i>	pro leagu	repost npcnews onlineof ficialpag	offici championship	ifbb aroundthenpc	leagu arizona	npc fest	show romania
11	Mental health	<i>frequent</i> <i>unique</i>	health doctorsu evarma	mental gruhine	import creditre pair	physic theeimre htfirm	tip vevfash	wellb edenboost	help myintro vert
12	Healthy eating (recipes)	<i>frequent</i> <i>unique</i>	white scrambl	salt berger	egg maison	breakfast strawb	bar omelett	pink multigrain	bread footnani
13	Positivity (happiness & love)	<i>frequent</i> <i>unique</i>	new shedder	will fasttest	come crowns milk	month egyptair	stay moukali mit	next tigerwit africa	see thefasttest shedd
14	Positivity	<i>frequent</i>	want	look	best	give	first	never	ever

	(gratitude)	<i>unique</i>	gorg	ever	yourbad dieguid	look	changer	carp	ladyboss fatloss
15	Positivity (affirmation)	<i>frequent</i> <i>unique</i>	daili aspir	group judiciari	state judgmen t	current jatin	news kurdiya	assist affair	aspir cite
16	Sleep	<i>frequent</i> <i>unique</i>	good bedtim	better groggi	sleep novotni	morn nap	feel zzzs	night snooz	routin mattress
17	Physical health (families)	<i>frequent</i> <i>unique</i>	develop workpla c	kid parent	children children	pandem survey	learn biocertic a	famili mycor	impact caregiv
18	Fitness & weight loss (supplement s)	<i>frequent</i> <i>unique</i>	vitamin magnesi um	supplem ent calcium	nutrient potassiu m	contain folat	miner seleniu m	rich mangan es	sourc folic
19	Promotion	<i>frequent</i> <i>unique</i>	follow baat	featur ayurvedi cpearl	photo rochakh ealth	credit lizearle wellb	girl linktr	tip url	content fitgoal
20	Beauty & supplements	<i>frequent</i> <i>unique</i>	immun curcumi n	boost reishi	system sambuc ol	support giloy	help cordyce p	anti shilajit	natur careu
21	Fitness & positivity	<i>frequent</i> <i>unique</i>	start right	right shonaali i	that sabherw	just eatwithh ayley	everyth sreerANJI ni	enough shonali	there fleurdeli sspeak
22	Healthy eating (recipes)	<i>frequent</i> <i>unique</i>	recip salad	cook pasta	salad squash	delici lettuc	veggi cilantro	pepper paleogir l	fresh cabbag
23	Beauty	<i>frequent</i>	skin	hydrat	glow	face	skincar	moistur	dri

		<i>unique</i>	cleanser	moisturizers	sunscre n	toner	impur	masqu	sunprote ct
24	Sleep	<i>frequent</i>	work	keep	put	hard	see	point	progress
		<i>unique</i>	lacey	supl	luther	work	armi	ivanov	lycpledg
25	Mental health (relationships)	<i>frequent</i>	peopl	help	person	world	other	posit	someon
		<i>unique</i>	unavail	moment nam	moment ofawar	boundar i	word	someon	friendsh ip
26	Self care & Mindfulness	<i>frequent</i>	mind	practic	breath	medit	moment	focus	peac
		<i>unique</i>	omer	healthyli feradio	breath	nhat	hanh	thich	yael
27	Self care	<i>frequent</i>	juic	detox	cleans	honey	sea	toxin	raw
		<i>unique</i>	detox	moss	seamoss	vybrant	manuka	juicer	pls
28	Promotion	<i>frequent</i>	use	code	offer	save	purchas	gift	sale
		<i>unique</i>	coupon	usn	usnkeny a	usnsa	usncz	usnuk	bogo
29	Fitness	<i>frequent</i>	fit	shape	model	com	best	vote	transfor m
		<i>unique</i>	wbff	wbffsho w	maxn	bighein z	diva	feat	fitandfir mmag
30	Mental health & detoxing	<i>frequent</i>	time	take	care	self	step	journal	write
		<i>unique</i>	pluto	national medassn	abcadio	amerme dicalass n	amafoun d	uranus	saturnus
31	Promotion	<i>frequent</i>	organ	base	plant	vegan	food	certifi	non
		<i>unique</i>	cathol	stainless	gujanw	sialkot	utensil	cookwar	roaster

		ala							
32	Motivation	<i>frequent</i> <i>unique</i>	well tami	journey faierma n	holist reshape yourima g	lifestyl vis	curat faberl	trend globalw ellnessd ay	done batra
33	Mental health	<i>frequent</i> <i>unique</i>	emot suicid	talk stigma	awar grief	mental abus	anxieti englishs tayatho medad	support faceboo kapp	experi neveralo nesumm it
34	Beauty	<i>frequent</i> <i>unique</i>	skin gua	age celluma	collagen calecim	cell drainag	reduc peptid	damag lymphat	line regener
35	Beauty	<i>frequent</i> <i>unique</i>	hand candl	clean allumi	bath handma d	box souflow	rose deodor	scent thiev	home atcleanb eauti
36	Promotion	<i>frequent</i> <i>unique</i>	women ajabsci	three pineal	men perimen opaus	cancer mel	woman mammo gram	rise chancey fit	breast punta
37	Promotion	<i>frequent</i> <i>unique</i>	can ask	know know	let let	mani answer	differ differ	ask yes	question what
38	Promotion	<i>frequent</i> <i>unique</i>	join eton	event areach	regist juneteen th	virtual ronald	saturday centri	member paso	will malugay
39	Promotion (athletics)	<i>frequent</i> <i>unique</i>	busi biohacki	team congress	commun iti gencliks	founder eudeleg	compani abbaska	across nin	support etkinlikl

			ngcongr ess		porbak	ationtur key	nligi		eri
40	Physical health (activity)	<i>frequent</i> <i>unique</i>	fast guess	cycl ride	drive bike	guess mile	road spira	ride guardian	walk ehret
41	Beauty	<i>frequent</i> <i>unique</i>	comfort pant	wear comfi	color tee	set wardrob	perfect jacket	size sanitari	style norba
42	Healthy eating (diet)	<i>frequent</i> <i>unique</i>	healthi eat	food calori	eat junk	diet carb	nutrit fad	meal keto	calori food
43	Promotion	<i>frequent</i> <i>unique</i>	light weather	summer warmer	season welli	air nuestro	fall cheeseb al	outsid estado	spring soment
44	Beauty	<i>frequent</i> <i>unique</i>	beauti adbhut	strong koa	gorgeou s blackbe autyfact	adbhut viewbyd usit	makeup alomov	talent svech	line angelou
45	Promotion	<i>frequent</i> <i>unique</i>	order doorstep	deliveri abuja	pick csu	call tastea	deliv greeness encehl	wednesd ay coldpres sedjuic	local marvo
46	Physical health (disease)	<i>frequent</i> <i>unique</i>	pain pcos	caus influenz a	diseas uti	may endomet riosis	sympto m uterus	can ovul	common vomit
47	Promotion	<i>frequent</i> <i>unique</i>	day lohri	week sankrant	today makar	happi happi	everi dooj	weeken d saturnda	great starki

				i				y	
48	Positivity	<i>frequent</i> <i>unique</i>	life truth	chang circumst	will belief	live path	way life	becom believ	believ faith
49	Promotion	<i>frequent</i> <i>unique</i>	book depilexg roup	call redahmi sbah	visit jlopezm d	com maje	today isma	pleas landlin	info rejuvena teuwelln essclin
50	Promotion	<i>frequent</i> <i>unique</i>	live urlif	video aimfit	sign upasana	watch kaminen i	app konidela	access thehous eofpixel	join damiank ristof
51	Travel	<i>frequent</i> <i>unique</i>	travel beach	retreat adventur	place surf	view grosven or	beach barsha	adventur cape	citi val
52	Promotion	<i>frequent</i> <i>unique</i>	product flipkart	now nanoved a	shop boeffi	avail nykaa	brand treasure herb	custom mineras pa	store saaral
53	Promotion	<i>frequent</i> <i>unique</i>	free curbsid	ship starnutri tionusa	plus wilayaw el	com binder	gluten vetc	vegan ucari	preserv baseri
54	Physical health, fitness (supplement s)	<i>frequent</i> <i>unique</i>	natur dosha	medicin kapha	tradit vata	earth obudu	sustain thatvioli nchick	world iwillare medi	plant kalsi
55	Promotion	<i>frequent</i>	friend	post	share	tag	commen t	like	win

		<i>unique</i>	giveawa y	notif	wellbea n	fitbeaut yremedi	fashiona rtdiy	entrant	bitesoft
56	Immune & Natural healing	<i>frequent</i> <i>unique</i>	make sure	sure make	easi josi	choos easier	small happiest	simpl fantastiq u	choic lavishby michelle ev
57	Fitness	<i>frequent</i> <i>unique</i>	workout technolog ym	goal grityard	train louisand friendsfi t	plan firefight erffit	exercis trainig	gym piroozva rasteh	challeng firehous evigil
58	Positivity	<i>frequent</i> <i>unique</i>	love came	year yall	thank took	amaz thank	much love	ive ago	big went
59	Promotion	<i>frequent</i> <i>unique</i>	sport samo	foundat donor	samo breadfru it	level kkc	phase sportpun i	facil brick	leaf khongk wanclin
60	Healthy eating	<i>frequent</i> <i>unique</i>	water sip	tea brew	drink rooibo	green vahdami ndia	coffe vahdam	blend mocktail	tast premix
61	Promotion	<i>frequent</i> <i>unique</i>	link yhelp	bio wayswel	click tarna	find handboo k	learn dietaryr esolut	read webstor	full devianta rt
62	Healthy eating (natural healing)	<i>frequent</i> <i>unique</i>	oil cbd	cbd spectru m	essenti tinctur	use thc	hemp cannabi noid	natur terpen	relief salv
63	Fitness	<i>frequent</i>	muscl	back	stretch	leg	moveme nt	shoulder	pain

		<i>unique</i>	hip	squat	knee	plank	hamstr	ankl	barbel
64	Positivity & Promotion	<i>frequent</i>	heal	energi	power	balanc	soul	sound	spiritu
		<i>unique</i>	chakra	vibrat	reiki	cosmic	astrolog	amethys t	blakesta r
65	Positivity	<i>frequent</i>	help	stress	improv	can	increas	level	benefit
		<i>unique</i>	cortisol	nervous	stress	vagus	neuron	dopamin	brain
66	Physical health (covid)	<i>frequent</i>	provid	medic	patient	therapi	covid	test	safe
		<i>unique</i>	consolid oc	occ	icryo	airthinx	theragun	personal ab	orthope d
67	Beauty	<i>frequent</i>	treatmen t	lip	facial	non	result	aesthet	remov
		<i>unique</i>	laser	botox	painless	coolscul pt	emsculp t	aesthetic svenus	venusae stheticsp k
68	Positivity	<i>frequent</i>	connect	inspir	creat	social	guid	live	music
		<i>unique</i>	trini	dat	meh	socawor ldapp	sldesign	trinicind yl	perl
69	Fitness (yoga)	<i>frequent</i>	yoga	class	session	studio	practic	danc	onlin
		<i>unique</i>	vinyasa	hatha	ballet	bachata	bridgett	plumb	argentin o
70	Promotion	<i>frequent</i>	get	back	littl	long	still	cant	got
		<i>unique</i>	cant	lockdow n	westmid	got	still	littl	weve
71	Promotion &	<i>frequent</i>	tell	run	space	behind	couldnt	half	agre
		<i>unique</i>	maratho	snuggl	kate	millenni	motto	noteboo	jumping

	Motivation		n					k	mind
72	Promotion	<i>frequent</i>	one	way	part	great	two	also	mention
		<i>unique</i>	one	part	way	great	mention	two	complet

Survey Measures

Institutional trust

Institutional trust was measured by asking participants how trustworthy they think the following groups are when it comes to acting in the best interest of the American people.

Responses: 1 = Extremely untrustworthy, 2= Mostly untrustworthy, 3 = Somewhat untrustworthy, 4 = Neither trustworthy nor untrustworthy, 5 = Somewhat trustworthy, 6 = Mostly trustworthy, 7 = Extremely trustworthy

Trust in Science

Colleges and universities ($M_{w2} = 3.79$, $SD_{w2} = 1.71$).

Scientists ($M_{w2} = 5.01$, $SD_{w2} = 1.63$).

Doctors and medical scientists ($M_{w2} = 3.48$, $SD_{w2} = 1.78$).

The Center for Disease Control ($M_{w2} = 4.81$, $SD_{w2} = 1.86$).

Trust in Government

The federal government ($M_{w2} = 3.52$, $SD_{w2} = 1.80$).

The Democratic party ($M_{w2} = 3.58$, $SD_{w2} = 2.11$).

The Republican party ($M_{w2} = 2.95$, $SD_{w2} = 1.96$).

The Military ($M_{w2} = 4.76$, $SD_{w2} = 1.59$).

Elected politicians ($M_{w2} = 2.58$, $SD_{w2} = 1.48$).

Trust in News Media

The news media ($M_{w2} = 3.37$, $SD_{w2} = 1.87$).

Journalists ($M_{w2} = 3.59$, $SD_{w2} = 1.86$).

Trust in Social Media

Social media companies ($M_{w2} = 2.71$, $SD_{w2} = 1.57$).

People you follow on social media ($M_{w2} = 4.01$, $SD_{w2} = 1.38$).

Beliefs were measured by asking participants whether they thought the following statements were true or false.

Responses: 1= Definitely False, 2= Probably False, 3= Unsure, 4 = Probably True, 5 = Definitely True

Controversial science beliefs

Human activity has been causing the Earth's climate to warm in recent years ($M_{w2}=3.75$, $SD_{w2}=1.36$).

Human beings, as we know them today, developed from earlier species of animals ($M_{w2}=3.27$, $SD_{w2}=1.50$).

Genetically modified foods are safe for humans to eat ($M_{w2}=3.12$, $SD_{w2}=1.15$).

Vaccines are generally safe and effective for most people ($M_{w2}=4.15$, $SD_{w2}=0.99$).

Wearing a mask over your mouth and nose can help to slow the spread of an infectious disease ($M_{w2}=4.18$, $SD_{w2}=1.19$).

Medical folk wisdom beliefs

Eating chicken soup can help people recover from illnesses more quickly ($M_{w2}=3.26$, $SD_{w2}=1.09$).

White spots on one's fingernails are indicative of a vitamin deficiency ($M_{w2}=3.42$, $SD_{w2}=0.90$).

Taking a multivitamin daily can help prevent catching illnesses like the common cold ($M_{w2}=3.30$, $SD_{w2}=1.06$).

Showering after sex is an effective way to prevent pregnancy ($M_{w2}=1.40$, $SD_{w2}=0.82$).

Not eating when one has a fever (sometimes called starving a fever) can reduce the amount of time it takes one to recover ($M_{w2}=2.50$, $SD_{w2}=0.99$).

Unevidenced wellness beliefs

Detoxes and cleanses are a healthy way to reset your body and remove toxins ($M_{w2}=3.11$, $SD_{w2}=1.18$).

Drinking celery juice in the morning can help to heal chronic health issues ($M_{w2}=3.11$, $SD_{w2}=1.18$).

Natural and organic products are better for human health than conventional products ($M_{w2}=3.49$, $SD_{w2}=1.08$).

Naturally occurring crystals can be used to enhance physical and mental health ($M_{w2}=2.40$, $SD_{w2}=1.05$).

Belief Superiority

Belief superiority was measured by asking respondents to indicate how much they view their beliefs to be more correct than other people's beliefs.

Responses: 1 = No more correct than other viewpoints, 2 = Slightly more correct than other viewpoints, 3 = Somewhat more correct than other viewpoint, 4 = Much more correct than other viewpoints, 5 = Totally correct (mine is the only correct viewpoint)

My views on protecting the environment are ($M_{w2}=2.61$, $SD_{w2}=1.25$)

My views on the strictness with which religious teachings are followed are ($M_{w2}=2.28$, $SD_{w2}=1.31$)

My views on national news and politics are ($M_{w2}=2.55$, $SD_{w2}=1.23$)

My views on the strictness with which etiquette rules are followed are ($M_{w2}=2.20$, $SD_{w2}=1.19$)

My views on the morality of fighting in a war are ($M_{w2}=2.38$, $SD_{w2}=1.26$)

Preference for Natural

Preference for natural was measured by asking respondents how much they disagree or agree with the below statements. Responses are on a 7-point scale with 1 being "strongly disagree" and 7 being "strongly agree."

In general, I prefer natural products over anything humans have created ($M_{w2}=4.31$, $SD_{w2}=1.50$)

It worries me when scientists try to improve on the natural world ($M_{w2}=4.01$, $SD_{w2}=1.63$)

Humans would be better off if we relied on nature more than ($M_{w2}=4.13$, $SD_{w2}=1.56$)

Aversion to tampering with nature was measured by asking respondents how much they disagree or agree with the below statements. Responses are on a 7-point scale with 1 being “strongly disagree” and 7 being “strongly agree.”

People who push for technological fixes to environmental problems are underestimating the risks ($M_{w2}=4.10$, $SD_{w2}=1.46$)

People who say we shouldn't tamper with nature are just being naïve ($M_{w2}=4.25$, $SD_{w2}=1.65$)

Human beings have no right to meddle with the natural environment ($M_{w2}=4.14$, $SD_{w2}=1.61$)

I would prefer to live in a world where humans leave nature alone ($M_{w2}=4.56$, $SD_{w2}=1.53$)

Altering nature will be our downfall as a species ($M_{w2}=4.53$, $SD_{w2}=1.59$)

Conspiratorial Ideation

Conspiratorial ideation was measured by asking respondents how much they disagree or agree with the below statements. Responses are on a 7-point scale with 1 being “strongly disagree” and 7 being “strongly agree.”

Events like wars, recessions, and the outcomes of elections are controlled by small groups of people who are working in secret against the rest of us ($M_{w2}=3.73$, $SD_{w2}=1.88$)

Much of our lives are being controlled by plots hatched in secret places ($M_{w2}=3.59$, $SD_{w2}=1.90$)

Even though we live in a democracy, a few people will always run things anyway ($M_{w2}=3.73$, $SD_{w2}=1.88$)

The people who really 'run' the country are not known to the voters ($M_{w2}=4.24$, $SD_{w2}=1.85$)

Table A2. Correlations of exposure to wellness content and seeking wellness content demographic information.

	Exposure to Wellness Content	Seeking Wellness Content	Age	Gender (Women)	Education	Party ID (Republican)
Exposure to Wellness Content	1.00	0.52***	-0.131***	0.21***	0.093**	-0.053
Seeking Wellness Content		1.00	-0.155***	0.237***	0.088**	-0.101**
Age			1.00	-0.002	-0.003	0.141***
Gender (Women)				1.00	-0.008	-0.087**
Education					1.00	-0.113***
Party Identification (Republican)						1.00

Note. *** $p < .001$, ** $p < .01$, * $p < .05$.

Table A3. Number of people who are exposed to wellness content and seek wellness content by racial identification.

	No exposure to Wellness Content	Exposure to Wellness Content	Does not Seek Wellness Content	Seeks Wellness Content
White	273	326	422	194
Black	36	63	53	47
Hispanic	47	59	72	39
Asian	4	20	11	13
Native American	1	1	3	0
Middle Eastern	1	3	3	1
Two or more races	8	7	12	2
Other	9	10	16	5

Table A4. Correlations of exposure to wellness content and seeking wellness content with relevant attitudes.

	Exposure to Wellness Content	Seeking Wellness Content	Preference for Natural	Aversion to Tampering with Nature	Belief Superiority	Conspiracy Ideation
Exposure to Wellness Content	1.00	0.52***	0.07*	0.02	0.05	0.03
Seeking Wellness Content		1.00	0.17***	0.12***	0.07*	0.02
Preference for Natural			1.00	0.60***	0.02	0.28***
Aversion to Tampering with Nature				1.00	-0.02	0.19***
Belief Superiority					1.00	0.10**
Conspiracy Ideation						1.00

Note. *** $p < .001$, ** $p < .01$, * $p < .05$.

Table A5. Correlations of exposure to wellness content and seeking wellness content institutional trust.

	Exposure to Wellness Content	Seeking Wellness Content	Trust in Science	Trust in Government	Trust in News Media	Trust in Social Media
Exposure to Wellness Content	1.00	0.52***	0.09*	0.07*	0.08*	0.19***
Seeking Wellness Content		1.00	0.10**	0.19***	0.17***	0.30***
Trust in Science			1.00	0.53***	0.71***	0.40***
Trust in Government				1.00	0.58***	0.56***
Trust in News Media					1.00	0.51***
Trust in Social Media						1.00

Note. *** $p < .001$, ** $p < .01$, * $p < .05$.

Table A6. Correlations of exposure to wellness content and seeking wellness content beliefs about science and health.

	Exposure to Wellness Content	Exposure to Wellness Content	Controversial Science Beliefs	Medical Folk Wisdom Beliefs	Unvidenced Wellness Beliefs
Exposure to Wellness Content	1.00	0.52***	0.04	0.08* 0.20**	0.10**
Seeking Wellness Content		1.00	-0.00	* 0.22**	0.26***
Controversial Science Beliefs			1.00	*	-.30***
Medical Folk Wisdom Beliefs				1.00	0.59***
Unvidenced Wellness Beliefs					1.00

Note. *** $p < .001$, ** $p < .01$, * $p < .05$.

Table A7a. Correlations of exposure to wellness content and seeking wellness content with social media use (1/2).

	Exposure to Wellness Content	Seeking Wellness Content	Facebook	Twitter	YouTube
Exposure to Wellness Seeking Wellness	1.00	0.52***	0.24***	0.5***	0.21***
		1.00	0.20***	0.16***	0.16***
Facebook			1.00	0.11**	0.11***
Twitter				1.00	0.28***
YouTube					1.00
Reddit					
Instagram					
TikTok					
Pinterest					
Snapchat					
Linkedin					

Note. *** $p < .001$, ** $p < .01$, * $p < .05$.

Table A7b. Correlations of exposure to wellness content and seeking wellness content with social media use (2/2).

	Reddit	Instagram	TikTok	Pinterest	Snapchat	Linkedin
Exposure to Wellness	0.10**	0.26***	0.18**	0.24***	0.19***	0.17***
Seeking Wellness	0.07	0.28***	0.24**	0.26***	0.27***	0.21***
Facebook	-0.06	0.15***	0.12**	0.14***	0.10**	0.12***
Twitter	0.39***	0.44***	0.27**	0.12***	0.21***	0.27***
YouTube	0.28***	0.27***	0.21**	0.13***	0.15***	0.14***
Reddit	1.00	0.26***	0.23**	0.16***	0.16***	0.27***
Instagram		1.00	0.37**	0.28***	0.45***	0.21***
TikTok			1.00	0.22***	0.39***	0.19***
Pinterest				1.00	0.23***	0.21***
Snapchat					1.00	0.18***
Linkedin						1.00

Note. *** $p < .001$, ** $p < .01$, * $p < .05$.