Just Pin It: Understanding the Dynamics of Pinterest Use, Motivation, Self-efficacy, and Health Behaviors

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Abstract

Image-based social media platforms, such as Pinterest, have revolutionized how individuals seek, share, and interpret health information. Previous research suggests a link between consuming social media content and intentions to engage in health behaviors; however, it is unclear if individuals who actively seek health-related information on social media engage in healthier behaviors. This mixed-methods study explored the relationships among Pinterest use, motivations, self-efficacy, and health behaviors. A total of 227 women completed surveys that included sociodemographic characteristics, motivation, self-efficacy, Pinterest use, and diet and exercise behaviors. Independent samples t-tests assessed differences in exercise behaviors, and multivariate analyses of variance determined differences in dietary behaviors. Open-ended short answers were coded using thematic analysis. There were no differences in dietary ($p = .18$) or exercise behaviors ($p = .23$) between Pinterest users and non-users. Curating health-related content was related to higher diet self-efficacy ($r = .25$), though there were no differences in dietary ($p = .06$) or exercise ($p = .51$) behaviors between Pinterest users with health-related boards and those without health-related boards. Four themes emerged from the qualitative data: (1) motivation to change; (2) construction of a health toolkit; (3) the best of intentions; and (4) looking to the future. Findings suggest that health-related content is pinned to inspire health behavior change; however, just engaging with the content on Pinterest is different than applying the information to the point of behavior change.

Keywords: social media, health behavior, diet, exercise

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Introduction

In the dynamic landscape of digital platforms, social media has become a powerful tool for individuals seeking motivation and inspiration for various aspects of their lives. Pinterest, a visual discovery and bookmarking platform, has emerged as a unique space where users can curate and share content tailored to their interests. Beyond its initial conception as a virtual bulletin board, Pinterest has evolved into a hub for lifestyle inspiration, and its potential for motivating health behaviors is increasingly recognized (Patha et al., 2017; Salgado & Jurberg, 2019).

The concept of social curation is integral to understanding how Pinterest is effectively utilized in promoting healthy habits. Social curation refers to the collective process of discovering, collecting, organizing, and sharing content within a community (Hall & Zarro, 2012). Users – called Pinners – discover content, including images, infographics, recipes, or videos, from the Internet, by using Pinterest's search engine,

or viewing the boards of friends, celebrities, companies, and government agencies. Pins are then collected and organized on themed virtual boards. In the context of health behaviors, specifically diet and exercise, users can create boards dedicated to health and wellness, curating a collection of images, recipes, workouts, and motivational quotes. This pinned content is accessible at any time and shared with followers. In addition, boards can be collaborative by allowing a collective sharing of pins by users who join groups. This introduces a new level of social interactions, as users with similar interests can connect by pinning, commenting, or saving content on a common board. Pinterest is the fifth largest social media platform with over 463 million users (Pinterest, 2023a).

Gender plays a notable role in shaping engagement on Pinterest, influencing the types of content users seek and share on the platform. Pinterest attracts a predominantly women user base. In its early years, women were five times more likely to be on Pinterest than men (Rainie et al., 2012); at present, 76% of users are women (Pinterest, 2023a). This gendered pattern of engagement has led to the development of content that caters to diverse aspects of women's interests and lifestyles. In light of these factors, the current study focused only on women Pinterest users.

One of the key strengths of Pinterest lies in its visually-driven interface. Users can pin images and videos that resonate with their fitness goals, creating a personalized collage of inspiration. This visual appeal taps into the psychology of motivation, as images are processed differently than text (Smith et al., 2020). Social media posts with images receive more engagement, such as "likes, comments, and shares" (Miller et al., 2019; Strekalova & Krieger, 2017) and recall of health information (Houts et al., 2006). Whether it is a picture of a nutritious meal, a workout routine infographic, or an image of a fitness role model, the visual nature of

Pinterest aids in fostering a desire towards adopting a healthy lifestyle. Visual cues also influence dietary choices. For example, exposure to a low-calorie recipe (Papies & Hamstra, 2010) and photographs of healthy food (Kemps et al., 2016) led to reduced subsequent food intake, and social media posts with images influenced exercise motivations more than content without images (Johnston & Davis, 2019). There are several underlying psychological processes that may explain this impact. These visual forms of communication provide environmental cues to prime behavior by initiating habits (Aarts & Dijksterhuis, 2000; Wood & Neal, 2007) or activating impulses or goals (Hofmann et al., 2008; Papies & Aarts, 2016). Furthermore, content with images may provide more easily accessible information necessary to engage visually in social comparisons (Festinger, 1954), which can subsequently promote motivation to pursue health-related goals (Collins, 1996; Halliwell & Dittmar, 2005; Richins, 1991).

Within health and wellness motivation, the role of social media extends beyond visual inspiration on platforms like Pinterest. Information-seeking, a dynamic process embedded in the fabric of social media engagement, plays a pivotal role in shaping self-efficacy – the belief in one's ability to achieve specific goals (Bandura, 1997; 2001). If one does not perceive themselves capable of achieving a desired outcome, there is no incentive to act. Enhancing self-efficacy can be achieved through observing and emulating social models (Bandura, 2008). Witnessing the dietary and exercise successes of others inspires viewers to believe that they, too, can achieve their goals. Pinterest's expansive range of content ensures users can tailor their content to align with their unique identities, preferences, and goals. This is vital, as the effectiveness of social modeling in fostering self-efficacy is maximized when

the observer identifies certain aspects of their own identity in the model (Bandura, 2008).

Using social media to seek and share health-related information is becoming increasingly popular (Chen & Wang, 2021; Vaterlaus et al., 2015), including for daily behaviors such as diet and exercise (Gomez-Lopez et al., 2017; Raggatt et al., 2018). When identifying why people join online communities, Ridings and Gefen (2004) found that information gathering was the most popular reason for joining. Relative to other online sources, social media may be more influential due to the sense of trust built through a parasocial relationship with the individual, company, or agency sharing the article, image, pin, post, or video (Brown & Basil, 2010; de Berail & Bungener, 2022). More than 80% of young adults would share health information on social media, and nearly 90% trust the information or would engage in health activities found on social media (PwC, 2012). Health and fitness boards are one of the most popular categories on Pinterest (Mittal et al., 2013), and 40% of users reported using Pinterest as a resource for health information (Pinterest, 2020). Pinterest has the potential to provide users with health information, and several studies have examined health-related content shared on Pinterest (e.g., Merten et al., 2022; Paige et al., 2015; Patha et al., 2017).

Information-seeking is linked to self-efficacy in that users equipped with knowledge are more likely to believe in their capabilities to implement and sustain positive health changes (Go & You, 2018; Lawrance & McLeroy, 1986; Rimal, 2000). Pinterest provides a vast collection of diverse wellness resources. From expert advice and scientific insights to personal narratives and success stories, users can tap into a wealth of knowledge that contributes to a comprehensive understanding of health-related topics. This broad exposure to information serves as a catalyst for enhancing self-efficacy by expanding individuals' knowledge base and providing them with a nuanced perspective on achieving health and fitness goals. By accessing a diverse range of information on nutrition, exercise routines, and well-being, individuals can develop well-informed plans. The process of goal setting and decision-making, rooted in a wealth of information, becomes a key driver in enhancing self-efficacy (Iwasaki et al., 2017; Shilts & Townsend, 2012).

Moreover, the social aspect of Pinterest amplifies its potential impact. Users can follow boards curated by others, creating a network of shared motivation. This interconnectedness fosters a sense of community and support, as individuals can engage with like-minded users and draw inspiration from others' success stories. The collaborative nature of social curation on Pinterest transforms the pursuit of health and wellness into a shared journey rather than a solitary endeavor. Pinterest offers a social curation site that users feel is without judgment, while simultaneously offering the opportunity of validation through engagements such as comments, likes, and saves (Linder et al., 2014). This ongoing dialogue fosters a dynamic environment where individuals feel supported and validated in their pursuit of a healthier lifestyle. Positive responses and constructive feedback contribute to a sense of accomplishment and competence, influencing self-efficacy beliefs. The supportive nature of these communities nurtures a sense of camaraderie and mutual encouragement, contributing to the development of self-efficacy. The exchange of information becomes a collaborative effort where collective wisdom bolsters individual confidence in pursuing and achieving health goals. The likelihood of behavior change, such as changes to diet or exercise behaviors, is increased when individuals feel these

choices are supported by their peers (Simpson & Mazzeo, 2016).

Pinterest, as an image-based social curation platform, should be effective in fostering motivation and self-efficacy to engage in healthy dietary and exercise behaviors. Previous research found that posting and viewing health-related content of others helped with maintaining motivation for their own health behaviors (Teodoro & Naaman, 2013), and individuals who follow more fitness-related boards on Pinterest report greater intentions to engage in weight-loss behaviors (Lewallen & Behm-Morawitz, 2016). Thus, it seems that actively engaging with diet and exercise related content on Pinterest may spark behavior change; however, the question remains whether Pinterest engagement can serve as a catalyst for transformative action.

With the current study, we aimed to improve understanding of the dynamics of Pinterest engagement in fostering motivation, self-efficacy, and diet and exercise health behavior outcomes. Through a mixed-methods approach, we posed the following research questions: (1) Do Pinterest users differ from non-users on motivation, self-efficacy, and diet and exercise behaviors? (2) Do Pinners that actively use the platform to curate health-related boards differ from Pinners that do not seek health-related content? and (3) What are the motivations that exist for using Pinterest for health-related purposes?

Methods

Participants and Procedures

Participants were recruited via social media announcements to participate in an anonymous online survey on social media, motivation, self-efficacy, and health behaviors. The recruitment announcements were posted on Facebook and Instagram once per week for two months. Posts were shared via our personal accounts, as well as using Facebook and Instagram accounts created for the study. In the posting, viewers were asked to share the research opportunity with others in an effort to reach more potential participants. Altogether, 40 recruitment posts were shared across the two platforms; however, it is impossible to know if the postings were shared or forwarded to others beyond the original posts. Anyone at least 18 years of age was eligible to participate, and no additional inclusion or exclusion criteria were indicated. Upon completion of the survey, participants were given the opportunity to enter into a drawing to win one of ten $25 gift cards.

Study Design

This study was a convergent parallel mixed methods design (Creswell, 2014), as both closed-ended quantitative data and open-ended qualitative data were collected concurrently via the same online survey (Figure 1). These data were analyzed separately and then merged to develop integrated results that expand understanding. By merging the self-reported quantitative data with the qualitative data from the open-ended questions, we added depth to the quantitative results and constructed a more comprehensive understanding of the relationships at hand (Fetters et al., 2013).

Survey Measures

The survey assessed sociodemographic characteristics, motivation, self-efficacy, social media use, and dietary and exercise behaviors. The sociodemographic characteristics included age, gender, ethnicity, and level of education.

Figure 1

Flow diagram of convergent, parallel mixed-methods design

| | Research Question 1 | Research Question 2 | Research Question 3 |
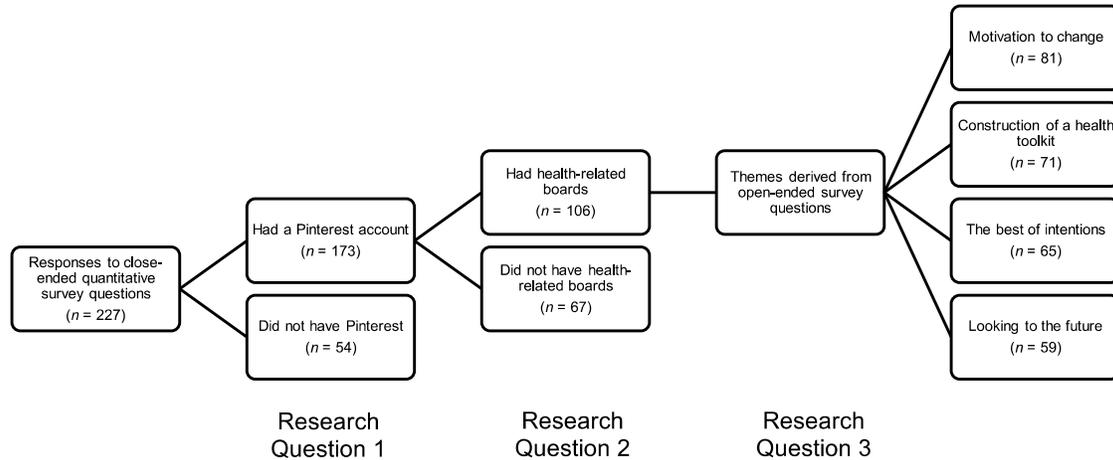
Motivation

Motivation was operationally defined as the force that initiates or sustains goal-oriented exercise and dietary behaviors. Motivations for participating in exercise were assessed using the Exercise Motivations Inventory-2 (EMI-2; Markland & Ingledew, 1997). The EMI-2 is a 51-item survey that measures why people personally choose to exercise. Participants respond on a 6-point Likert scale ranging from 0 (*not at all true for me*) to 5 (*very true for me*) with reasons they are physically active or might be physically active. Sample responses include: "to show my worth to others" and "because my doctor advised me to exercise." The EMI-2 is a well-established metric used to measure exercise motivations among a variety of populations, including college students, adults, and older adults (Dacey et al., 2008; Ingledew et al., 1998; Kilpatrick et al., 2005). In initial scale development, construct validity was demonstrated by the ability to distinguish between different gender motivations; the internal consistency of the distinct factors was acceptable (α = .63-.90); and the test-

retest reliability correlation of the original questionnaire subscales varied from .59 to .88 (Markland & Hardy, 1993)

For the sake of this study, the 14 subscales of the EMI-2 were categorized as mental (stress management, revitalization, enjoyment, and challenge), social (social recognition, affiliation, and competition), health (health pressures, ill-health avoidance, and positive health), appearance (weight management and appearance), and physical (strength, endurance, and nimbleness). The created subscales had acceptable levels of reliability – mental (15 items, α = .94), social (12 items, α = .91), health (9 items, α = .79), appearance (8 items, α = .87), and physical (7 items, α = .90).

Motivations for dietary behaviors were assessed using the Food Choice Questionnaire (FCQ; Steptoe et al., 1995). The FCQ is a 36-item that assesses nine motives for food choice – health, mood, convenience, sensory appeal, natural content, price, weight control, familiarity, and ethical concern. Participants responded to the statement: "It is important to me that the food I eat on a typical day…" for each item by

choosing between four responses, scored 1 to 4: *not at all important*, *a little important*, *moderately important*, and *very important*. Sample responses include "is easy to prepare," "helps me control my weight," and "is like the food I ate when I was a child." The FCQ has been shown to be a valid and reliable measure for assessing food choice motivations. Test-retest reliability for the scales is satisfactory (.71-.83) and associations between FCQ scales and age, income, value of health, locus of control, and dietary restraint suggested predictive and convergent validity (Steptoe et al., 1995). Cronbach α scores for the current sample were as follows: health = .82, mood = .85, convenience = .81, sensory appeal = .66, natural content = .85, price = .83, weight control .79, familiarity = .76, and ethical concern = .78. These reliabilities corresponded to the reliabilities found during scale development (α = .72-.86; Steptoe et al., 1995).

Self-efficacy

The exercise and nutrition subscales of the Self-rated Abilities for Health Practices Scale (Becker et al., 1993) measured how efficacious participants feel they are in engaging in physical activity and dietary behaviors. Participants rated how well they can perform each task on a five-point scale, from 0 (*not at all*) to 4 (*completely*). Sample tasks included: "Find ways to exercise that I enjoy" and "Eat a balanced diet." In initial scale development, the Self-rated Abilities for Health Practices Scale was positively correlated with general self-efficacy and self-reported engagement in health behaviors. Furthermore, the test-retest reliability of the subscales was acceptable (.63 to .73; Becker et al., 1993). Reliability was acceptable for both exercise (7 items, α = .84) and diet (6 items, α = .84) and were similar to reliabilities found in undergraduate and general population samples during scale development (α = .81-.92; Becker et al., 1993).

Social Media Use

Social media use was measured using items developed for this study. Quantitative questions assessed the amount of time spent on Pinterest and the number of health-related boards and pins, while qualitative questions assessed participants' motivations and perceptions of their use of Pinterest. The qualitative portion of the survey included six open-ended questions to assess why they created health-related boards, why they have health-related boards, what they use the boards for, if they use Pinterest specifically to find health-related information, if they believe their family and/or friends use Pinterest for health-related information, and why they have health-related pins that they have not used.

Dietary Behaviors

To determine participants' dietary behaviors, questions were formulated from the United States Department of Agriculture's (USDA) healthy eating recommendations in the Dietary Guidelines for Americans (USDA, 2020). Participants indicated the number of fruits, vegetables, whole grains, low-fat dairy products, red meat, fish, fried food, sugar-sweetened beverage, and alcohol servings consumed in the last seven days. An additional question asked participants to provide their perception of the healthfulness of their diet on a Likert scale from 1 (*Not at all healthy*) to 5 (*Extremely healthy*). Although some inaccuracies are expected regarding the amount of consumption due to difficulties recalling what and how much food was consumed, food frequency questionnaires are one of the most commonly used dietary

assessment tools. This is due to the ease of administration in self-reported surveys, minimal time burden placed on participants, and the ability to make a better estimate of the typical diet due to longer recall (Hebert et al., 1997; National Cancer Institute, 2023).

Exercise Behaviors

We used the short form of the International Physical Activity Questionnaire (IPAQ; Booth, 2000) to measure physical activity and exercise behaviors. The IPAQ short form has had an acceptable test-retest reliability with three-fourths of the coefficients above .65 and moderate associations with self-reported activity via the IPAQ and physical activity measured via accelerometers (Craig et al., 2003). Participants reported how physically active they had been over the past seven days, including the number of days and the typical time per day spent engaging in walking, moderate activity, and vigorous activity. Total MET minutes per week, a continuous score, was calculated using the recommended MET values from the reliability and validity study of the IPAQ (Craig et al., 2003) as follows: (days per week walking x daily minutes of walking x 3.3) + (days per week of moderate-intensity activity x daily minutes of moderate-intensity activity x 4.0) + (days per week of vigorous-intensity activity x daily minutes of vigorous-intensity activity x 8.0).

Data Analysis

Descriptive statistics and correlations were computed for all variables of interest. We used two one-way multiple analysis of variances (MANOVAs) to determine the difference in dietary behaviors between Pinners and those who do not have Pinterest, as well as differences between Pinners who have health-related boards and Pinners who do not. Independent samples t-tests were used to determine the effect of having Pinterest and having health-related boards on exercise. Preliminary analyses indicated that the assumptions of normality, independence, and equality of variances and covariate matrices were satisfied. Analyses were performed using SPSS (Version 29) and an alpha of .05 was adopted for all analyses.

The six open-ended questions were coded using thematic analysis (Braun & Clarke, 2006). All members of the research team read the entirety of the qualitative data twice before coding to ensure familiarity with the content. Two of us independently coded individual extracts of data. During coding, we recorded memos to allow us to engage more deeply with the data, explore the meanings the data hold, identify emerging impressions, and sustain momentum (Birks et al., 2008). We maintained reflexive journals to keep a record of the research process, key decisions, and our feelings. Weekly research team meetings were held during the coding process to encourage reflexivity and facilitate peer debriefing. Coded data extracts were transferred to index cards to sort the data into themes using an inductive approach (Braun & Clarke, 2006). We then independently reviewed the codes for each theme to ensure a coherent pattern was present. During this phase, themes were refined and collapsed to summarize the qualitative responses. We reached consensus on all themes during research team meetings. In lieu of member checking – which could not be conducted due to the anonymous nature of data collection – we returned to the raw data to ensure the participants' voices were reflected and the developed themes were grounded in the data (Lincoln & Guba, 1985).

Trustworthiness

As Nowell et al. (2017) recommend, we met the criteria for trustworthiness (Lincoln

& Guba, 1985) using the following means throughout the qualitative analysis process: (1) methodological triangulation; (2) researcher triangulation; (3) peer debriefing; and (4) audit trail.

Methodological Triangulation

The use of multiple data sources via a convergent parallel mixed-methods design adds credibility to the research findings and interpretations (Lincoln & Guba, 1985). The qualitative component provided context and meaning to the interpretation of the quantitative self-report data.

Researcher Triangulation

We spent a prolonged time immersed in the data prior to generating the initial codes. Upon coming together, we diagrammed the connections between the themes and coded data extracts. After identifying the themes, each of us returned to the raw data to review the themes. Finally, consensus on the themes was reached by all members of the research team.

Peer Debriefing

The qualitative data analysis process was reviewed and discussed by all members of the research team at three separate times – during the initial generation of coded data extracts, after the identification of themes, and when writing the report. Team members that were not directly involved in the data analysis were encouraged to review and raise questions regarding methodological approaches, findings, and interpretations. This strategy increases reflexivity among researchers and enhances credibility by providing an external perspective on the research process.

Audit Trail

Reflexivity is critical in creating the audit trail. We maintained reflexive journals to document the research process, methodological decisions, rationales, and reflections (Lincoln & Guba, 1985). Records of the raw data, memos, reflexive journals, and notes from research team meetings provide auditable evidence in support of the trustworthiness of this study.

Results

Sample Characteristics

A total of 244 women accessed the survey; of these, 227 participants completed the anonymous survey in its entirety and their data were retained for analysis (93%). Participants ranged in age from 18 to 48 years, with a mean age of 21 ± 4.5 years. The race/ethnicity of the sample was 52% white, 20% Asian, Native Hawaiian, or Pacific Islander, 5% Hispanic, 4% black, and 19% multiple ethnicities. With regards to education, 1% had some high school, 27% had completed high school, 62% had some college, 5% had completed a four-year degree, and 5% had a post-graduate degree.

Over two-thirds (n = 173; 71%) of participants had a Pinterest account. Participants spent an average of 19.5 minutes on Pinterest per day. Those curating health-related boards (n = 106; 61%) had an average of 118 health-related pins and followed seven health-related boards. Non-white participants were less likely to have Pinterest (r = -.131, p = .049), and as age increased, participants were less likely to have health-related boards (r = -.170, p = .030).

Table 1

Relationships among Pinterest use, self-efficacy, motivation, and dietary behaviors

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
1. Age	--																
2. Time on Pinterest	.04	--															
3. Health-Related Pins	-.07	.14	--														
4. Self-Efficacy	-.09	-.15	.25*	--													
5. Health[a]	-.09	.01	.15	.62***	--												
6. Mood[a]	-.19**	.15*	.06	.23***	.39***	--											
7. Price[a]	-.06	.03	.07	-.10	.04	.30***	--										
8. Convenience[a]	.05	.16*	.02	-.02	.08	.40***	.63***	--									
9. Sensory Appeal[a]	-.09	.21**	-.06	.07	.23***	.61***	.24***	.36***	--								
10. Natural Content[a]	-.08	.05	.27**	.51***	.68***	.32***	-.07	-.09	.19**	--							
11. Weight Control[a]	-.01	.08	.11	.37***	.52***	.31***	.15*	.23***	.18**	.39***	--						
12. Fruits[b]	-.01	.00	.08	.25***	.36***	.05	-.09	-.15*	-.03	.28***	.21**	--					
13. Vegetables[b]	.18*	-.06	.18	.29***	.31***	-.01	-.19**	-.28***	-.13	.38***	.14*	.44***	--				
14. Alcohol[b]	.27***	-.06	.03	.18*	.11	.00	-.09	-.08	-.03	.11	.00	.03	.13	--			
15. Sugar-Sweetened Beverages[b]	-.11	-.01	-.16	-.33***	-.20**	-.17*	.06	.01	.04	-.25***	-.19**	-.07	-.18*	-.09	--		
16. Meat (Non-Lean)[b]	.13	.03	.06	-.07	-.09	.07	.10	.12	.04	-.10	.02	-.10	.01	.05	.09	--	
17. Fried Foods[b]	-.09	.02	-.14	-.24***	-.31***	-.07	.10	.11	-.01	-.28***	-.22**	-.21**	-.31***	-.05	.23**	.24***	--
18. Perceived Diet	.04	-.11	.28*	.44***	.45***	-.00	-.26***	-.30***	-.13	.44***	.19**	.44***	.58***	.02	-.18*	-.06	-.32***

Note.

[a] Motivation subscale; [b] Measured in servings per week; * $p < .05$, ** $p < .01$, *** $p < .00$

Pinterest Use, Motivation, Self-efficacy, and Behavior

A one-way MANOVA was conducted to determine if there was a difference between Pinners and individuals not using Pinterest on consumption of food groups (fruits, vegetables, alcohol, fish, non-lean meats, fried foods, and sugar-sweetened beverages) and perceived diet. There was a non-significant difference in dietary behaviors ($F_{\text{Wilks' Lambda}}$ (8, 177) = 1.343, $p = .225$, $\eta_p^2 = .06$). Although there were no relationships between having Pinterest and motivation and self-efficacy, people whose food choices were more motivated by sensory appeal ($r = .182$, $p = .002$), convenience ($r = .162$, $p = .019$), and mood ($r = .146$, $p = .035$) spent more time on Pinterest.

An independent samples t-test was conducted to compare exercise behavior for Pinners and individuals not using Pinterest. There was no statistically significant difference in MET minutes per week for Pinners ($\bar{X} = 3635.70 \pm 3150.48$) and non-Pinterest users ($\bar{X} = 4249.44 \pm 3467.56$; $t_{215} = 1.21$, $p = .228$, $d = .190$). Tables 1 and 2 show the relationships among Pinterest use, motivation, self-efficacy, and dietary and exercise behaviors.

Health-related Pinterest Use, Motivation, Self-efficacy, and Behavior

The test of the multivariate null hypothesis indicated no differences on the set of dietary behaviors and perceived diet between Pinners with health-related boards and Pinners without health-related boards ($F_{\text{Wilks' Lambda}}$ (8, 135) = 1.935, $p = .060$, $\eta_p^2 = .10$). Individuals that had created health-related boards were also more motivated by natural content ($r = .223$, $p = .003$) and health ($r = .206$, $p = .007$) and reported higher diet self-efficacy ($r = .226$, $p = .003$). Those that pinned more health-related content had higher dietary self-efficacy ($r = .249$, $p = .014$) and perceived their diet to be healthier ($r = .275$, $p = .010$), but did not have healthier consumption behaviors.

We conducted an independent samples t-test to compare exercise behavior for Pinners with health-related boards and Pinners without health-related boards. There was no statistically significant difference in MET minutes per week for Pinners with health-

Table 2

Relationships among Pinterest use, self-efficacy, motivation, and exercise behavior

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Age	--								
2. Time on Pinterest	.04								
3. Health-Related Pins	-.07	.14	--						
4. Self-Efficacy	-.22**	-.06	.15	--					
5. Mental[a]	-.24***	-.16*	.26*	.66***	--				
6. Social[a]	-.26***	-.07	.02	.53***	.63***	--			
7. Health[a]	-.13*	-.09	.18	.38***	.54***	.36***	--		
8. Appearance[a]	-.20**	.06	-.01	.24***	.29***	.35***	.40***	--	
9. Physical[a]	-.36***	-.13	.20	.48***	.64***	.51***	.58***	.46***	--
10. Exercise[b]	-.17*	-.05	.09	.48***	.41***	.43***	.22**	.06	.30***

Note.
[a] Motivation subscale of the EMI-2 (Markland & Ingledew, 1997); [b] Measured in MET minutes/week; * $p < .05$, ** $p < .01$, *** $p < .001$

related boards ($\bar{X}$ = 3769.47 ± 2873.31) and those without health-related boards ($\bar{X}$ = 3434.02 ± 3541.53; t_{161} = -.664, p = .507, d = -.106). Being more motivated by the mental aspects of exercise was associated with having more health-related pins (r = .259, p = .015) and spending less time on Pinterest (r = -.163, p = .024). Tables 1 and 2 report additional relationships among health-related social media use, self-efficacy, motivation, and behaviors.

Motivations for Health-related Pinterest Use

Four themes emerged from analysis of responses to the six open-ended survey questions: (1) motivation to change; (2) construction of a health toolkit; (3) the best of intentions; and (4) looking to the future. Table 3 provides a sample narrative and percentage of participants who brought forth the identified themes.

Motivation to Change

"Fitspiration," i.e., Internet and social media content designed to inspire individuals to live a healthy and fit lifestyle through motivational diet- and exercise-related messaging, has become increasingly popular. The dominant impetus behind the creation of health-related boards and the addition of pins was the desire for participants to use this content "*to help [themselves] change*" or "*to improve [their] health behaviors*." Participants felt that pinning content that provided examples of exercises or recipes would "*motivate [them] to exercise and develop a healthy body*."

Construction of a Health Toolkit

To change one's behavior, they must have the tools at their disposal necessary to do so. Participants also used Pinterest and saved content to provide "new, interesting ideas to achieve [their] goals of getting healthy." The content added to their boards was used to provide ideas about exercises to perform or healthy foods to make. In essence, each pin was another tool in their toolbox to use to achieve behavior change. According to one participant, they had health-related boards

"Because I am really interested in being active, in eating well, and in ensuring I am aware of better, more interesting, and novel ways to do this. I like having a tool for finding new ways to be healthy, to stay motivated, and to store ideas for when I need to mix up my workouts."

The breadth of content available on social media exposes participants to a wide variety of options regarding diet and exercise behaviors to help them achieve their goals.

The Best of Intentions

Participants reported using the health-related pins and boards on Pinterest to provide motivation and ideas regarding diet and exercise because they intend to change those behaviors; however, intentions do not always translate to behavior, and participants expressed this intention-behavior gap. One participant said: *"I'm kind of a pin hoarder. I might want to use that recipe someday but I probably won't."* This lack of referring back to the health-related content participants had pinned not only highlights the well-documented mismatch between intentions and behaviors, but also a challenge with Pinterest itself: *"I intend to go back to it but normally forget that I even have it pinned. I don't take my computer to the gym so it's not practical for referring to at the gym."* Thus, participants intend to use these pins for ideas and motivation to change their behavior but fail to refer back to them, whether because

Table 3

Themes from inductive qualitative data analysis

Theme	Sample Narrative	Frequency (%)
Motivation to Change	*"I use it to motivate me to exercise and develop a healthy body"*	76
Construction of a health toolkit	*"It gives me new, interesting ideas to achieve my goals of getting healthy"*	67
The best of intentions	*"I'm kind of a pin hoarder. I might want to use that recipe someday but I probably won't"*	61
Looking to the future	*"The pins are for later use."*	56

individuals have forgotten all about the pins or it is inconvenient to access them.

Looking to the Future

People tend to put off decisions for the future, despite knowing they are in our best interest to engage in today. Individuals often find themselves thinking, "I'll start on Monday," especially in reference to beginning healthy eating or exercising. In alignment with making suboptimal decisions in the present, participants indicated that the pinned content on their health-related boards was "*for the future*" and "*later use.*" They do intend to engage in diet and exercise behavior change, just not today; rather, participants used Pinterest "*to keep note of ideas I might want to try in the future.*"

Integration of Quantitative and Qualitative Results

After analyzing the quantitative and qualitative data, we compared the results from each to identify areas of convergence, divergence, and expansion. Quantitative and qualitative data converged when the results from each data source were similar. Pinners with health-related boards reported using these pins to motivate them to make healthier choices, which reflected in their food choices being guided more by the motives traditionally deemed more health conscious: health and natural content.

Whereas convergence was present for food choice motivations, there was divergence in the results for the exercise motivations. Quantitative and qualitative data diverged when the results from each data source were dissimilar. Although health-related users reported using Pinterest to motivate them to be more physically active, their scores on the exercise motivation subscales did not generally differ from Pinners without health-related boards.

The integration of the data also resulted in an expansion of understanding. The qualitative comments provided context for a non-significant difference in dietary and exercise behaviors between Pinners with health-related boards and those without. Pinners may curate health-related content to provide ideas and motivation to make healthier dietary and exercise behavior choices, but simultaneously, these pins are

forgotten, ignored, or simply something to revisit in the future.

Discussion

This mixed-methods study delved into the dynamics between Pinterest use, motivation, self-efficacy, and dietary and exercise behaviors. Self-report measures unveiled intriguing associations wherein curating health-related boards on Pinterest correlated with distinctive motivations driving food choices and exercise habits. Participants who engaged with Pinterest for health-related purposes exhibited higher dietary self-efficacy, suggesting a positive influence on their confidence in maintaining a healthy diet; however, our results also revealed a notable disjunction between motivations and actual behaviors. Whereas the food choices of individuals using Pinterest for health-related purposes were notably motivated by health and natural content, there were no differences in their dietary and exercise behaviors. Despite a motivational drive towards health-conscious choices, participants did not translate these intentions into increased physical activity or a discernibly healthier diet.

Descriptive statistics revealed that 71% of participants used Pinterest. Participants in this sample reported using Pinterest an average of 19.5 minutes per day, a rate 33% higher than the average user (14.2 minutes; Seitz, 2023). Of those that were Pinners, 61% used Pinterest for health-related purposes by curating pins on diet- and exercise-related boards, underscoring the platform's significance as a digital space for health-conscious content curation. These findings not only emphasize the prevalence of Pinterest use within the sample but also shed light on its specific role as a hub for health-focused content among a significant segment of users.

Food/drink is one of the most popular categories on Pinterest (Hall & Zarro, 2013) harboring over 18 billion recipes that are frequently located using search terms such as "meal ideas" and "easy dinner recipes" (Pinterest, 2023c). From healthy food choices, easy-to-prepare meals, and foods for every mood, there is something for everyone. Although there were no differences in behavior between Pinterest users and non-Pinterest users, participants whose food choices were motivated by sensory appeal, convenience, and mood spent more time on Pinterest. People driven by such factors may find the platform particularly engaging due to its rich visual content and diverse array of ideas. Pinterest provides an endless display of mouthwatering images, is a hub for quick and easy recipes tailored to busy lifestyles and offers ideas for comfort foods and mood-boosting recipes. The platform's capacity to curate content based on these motivations transforms Pinterest into a personalized culinary playground, offering a visually stimulating and convenient space for individuals to explore, discover, and plan meals that align with their sensory, practical, and emotional food preferences.

Linder et al. (2014) found that pins served specific purposes: ideation, goal-setting, motivation, planning, to increase expertise, and to self-actualize. Our results support this, with participants revealing that health-related content provided ideas to help achieve wellness goals and was a source of inspiration to adopt a healthier lifestyle. This supports previous research that found the primary reason for seeking content related to health and well-being was for inspiration to exercise or improve one's health or well-being (Raggatt et al., 2018). Despite curators of health-related boards revealing that this content is pinned so that it may inspire health behavior change, there is a disconnect between pinned content and subsequent behaviors.

Pinning something to Pinterest can be

interpreted as a representation of intentions to act. Evidence suggests that only 30%-40% of the variation in health behaviors is predicted by intention (Armitage & Conner, 2001; Rhodes & de Bruijn, 2013). This failure to translate intentions into actions, known as the intention-behavior gap, is evident in both physical activity and diet (Adriaanse et al., 2011; Rhodes & de Bruijn, 2013). The intention-behavior gap was supported in our present study. Participants reported pinning health-related content to create a repository of ideas and strategies they intend to explore or implement. Although pinning content to Pinterest does not guarantee immediate behavior change, it reflects an individual's conscious effort to engage with health-related content, visually articulate goals, signal a prioritization of health, and create a digital environment that supports and reinforces their intentions to act in ways that align with a healthier lifestyle. As our findings suggest, pinning on Pinterest can serve various purposes beyond immediate action. It allows users to express creativity, explore interests, and collect ideas, even if the implementation of every pinned item is not guaranteed or immediate.

Curating health-related boards was associated with higher dietary self-efficacy, although this relationship was absent for exercise self-efficacy. Social media serves as a model of performance (Simpson & Mazzeo, 2016), which is key to improving self-efficacy (Bandura, 2008). It may be that the plethora of diet-related pins provides more tutorials or examples of people in similar circumstances demonstrating confidence that make dietary choices seem more achievable. Pinterest's ability to provide social modeling for dietary behaviors was found by Linder et al. (2014), as users credited the site for increasing their self-efficacy: *"I didn't even know how to cook or how to do the simplest meals. [Pinterest] gives me step by step [instructions], and I see other people trying*

it. Then, I'm like, 'Okay, this isn't that hard.'..." (p. 7). In comparison, exercise and fitness content is significantly less popular on Pinterest; furthermore, much of the content features idealized bodies, which may not be relevant to the average Pinner.

Although engagement with health-related boards was associated with higher diet self-efficacy, there was no difference in dietary behaviors between Pinners with health-related boards and Pinners without health-related boards. As we noted previously, there is no shortage of pins related to food and drinks. Pinners report having a variety of diet-related boards, including specific boards for alcoholic drinks, dinner ideas, desserts, and one that is just cake (Linder et al., 2014). Pinterest users likely have boards that organize ideas for both healthy and less healthy food choices, and research suggests that engagement with pins differs depending on the ingredients of the recipe. Pinterest users weighed taste more heavily than health, and recipes with higher fat content and calories per serving had more user engagement via comments and shares (Cheng et al., 2021).

We found no statistically significant differences in exercise behaviors between Pinners with health-related boards and Pinners without health-related boards. Acute exposure to fitspiration content in laboratory settings has not resulted in differences in actual exercise behavior (Prichard et al., 2020; Robinson et al., 2017). When looking at habitual fitspiration exposure and exercise behaviors, the absence of an effect remained (Bowles et al., 2021). Our study extends these findings, suggesting that engagement with fitness-related content on Pinterest was not related to exercise behavior, although the precise nature of the content participants viewed is unknown.

It is worth considering that the very nature of Pinterest could contribute to the lack of action. During its initial diffusion, Pinterest

was even referred to as *"digital crack for women"* (Dvorak, 2012, para. 3). This highlights the addictive quality of the platform, especially among women. Pinterest's interface allows for infinite scrolling, a platform design which loads content continuously as the user scrolls (Hoekman & Spool, 2009). Without a natural signal to stop and virtually no end to the content one can consume, users can find themselves experiencing timelessness and dissociative states (Lyons et al., 2022). In one phenomenological study on Pinterest experiences, a participant described this dissociation: *"I get sucked in… and then two hours later have no idea of how I got to where I am"* (Zarro et al., 2013, p. 653). Participants in our study reported slightly higher usage than the average user, suggesting that they may find themselves mindlessly scrolling and pinning content without thought. It is also possible that infinite scrolling will expose Pinterest-users to diet- and exercise-related content regardless of whether they have personally created health-related boards. Bowles et al. (2021) found that one need not intentionally follow fitspiration content for it to be consumed; therefore, the absence of curated health-related boards does not preclude one from engaging with diet- and exercise-related content.

Pinterest allows one to shape their identity and express interests (Linder et al., 2014). People may then pin health-related content to their boards to be perceived by others that they live a healthy lifestyle. Users cannot only curate their perfect workout routine or meal plan but also share it with viewers. Pinterest boards, like other social media platforms (Davis, 2010; 2012), allow users to control the information presented using time, effort, and conscious decisions about what content to pin. Previous research found individuals with higher body mass index were more likely to engage with social media content that validated healthy food choices

(Kinard, 2016); thus, Pinterest users may be pinning health-related content to present and identify with healthy lifestyle choices.

Pinterest represents a sort of digital daydream where users can visualize their possible future selves (Phillips et al., 2014), which the qualitative responses supported. Pinterest allows users to play with an alternative future or "test out" possible selves (Phillips et al., 2014). Possible selves "…represent specific, individually significant hopes, fears, and fantasies" (Markus & Nurius, 1986, p. 954), which provide insights into both how one views their current self as well as future behaviors. The pinned content, then, does not necessarily represent the behaviors of today, but rather, the idealized tomorrow. These findings support previous work, in that pins serve a purpose both for one's current as well as future needs (Linder et al., 2014). Although participants intentionally engaging with health-related content did not differ from Pinners without health-related boards, it does not mean they cannot use those pins to elicit desired behavior change in the future.

Limitations and Future Recommendations

The present study utilized a convenience sample of women, the target demographic of Pinterest; however, the average age was only 21 years. Pinterest is more popular with older and higher-income households (Pinterest, 2023a). In this study, we did not assess what other sources of health information used to inspire their health behavior decisions. Millennials and Gen Z may be accessing health information from other social media platforms, so repeating this study with TikTok or Instagram may provide clearer insights into the use of social media as it relates to dietary and exercise behaviors. We did not collect information about how participants interacted with their pins in our

study. It is unknown if participants merely looked at the pin's face content, added it to their boards and continued to infinitely scroll, or if they performed the exercise or prepared the recipe they pinned. Finally, our study was cross-sectional. When looking at Pinterest and purchasing intent it was found that behaviors change as one gets closer to a project (Lo et al., 2016). A longitudinal study could explore how social media behaviors evolve, both in searches and saved pins, regarding health-related content as goal-oriented behaviors change.

Implications for Health Behavior Research

Our study showed that individuals use Pinterest to discover health-related information, collect pins as inspiration to live a healthier lifestyle, and believe in their abilities to achieve their dietary goals. Whereas active engagement with health-related content on Pinterest might not independently bring about behavioral changes, it plays an influential role in the process of adopting healthier behaviors. Our findings have noteworthy implications for health behavior research. First, the observed use of Pinterest as a platform for discovering and collecting health-related information highlights its potential as a valuable resource for health communication. Researchers may explore the effectiveness of targeted health campaigns or interventions delivered through Pinterest, considering its role in information dissemination. Moreover, the identification of Pinterest as a source of inspiration for adopting a healthier lifestyle suggests that interventions incorporating visually appealing and motivational content could be more effective in promoting health behavior change.

The content and information on the health-related pins were beyond the scope of this study; however, previous research suggests that health-related content posted on social media may be inaccurate or incomplete (Marocolo et al., 2021; Merten et al., 2022), lack elements of health behavior theory (Merten et al., 2019; Patha et al., 2017; Wilkinson et al., 2016), and promote unhealthy ideals (Ghaznavi & Taylor, 2015). Social media is a powerful tool to maximize the reach and impact of health communication (Chou et al., 2009), but only when the information is accurate, complete, and reliable (Moorhead et al., 2013; Neiger et al., 2012). The lack of health behavior theory in social media health-related content suggests an opening for increased collaboration between health educators and "influencers" to create accurate, comprehensive, and visually appealing content that directs users to reliable sources for health information.

Finally, the correlation between Pinterest engagement and individuals' belief in their abilities to achieve dietary goals underscores the platform's role in bolstering self-efficacy. Health behavior researchers could investigate the mechanisms through which Pinterest influences self-efficacy and explore how this, in turn, contributes to initiated and sustained behavior change. Possible avenues for future research might include examining the impact of social support within Pinterest communities, the influence of content accuracy, and the role of personalized feedback mechanisms. By delving into these areas, health behavior researchers not only can enrich our understanding of the dynamics between Pinterest engagement and self-efficacy, but also contribute to development of targeted strategies for leveraging digital platforms in health promotion efforts.

Ethics Approval

Approval from the Institutional Review Board of Pacific University was received prior to recruitment, and participants

provided their informed consent before accessing the survey.

Conflict of Interest

The authors report no conflicts of interest.

Discussion Questions

Parasocial interactions are a powerful tool for influencing health behaviors, though public health organizations have not fully harnessed their potential. How might health behaviorists better utilize social media platforms to effectively communicate health information? Taking it a step further, how could they be used as intervention tools to improve behavior?

Pinterest's policies prohibit the spread of misinformation, including "medically unsupported health claims that risk public health and safety, including the promotion of false cures, anti-vaccination advice, or misinformation about public health or safety emergencies" (Pinterest, 2023b, para. 9); however, the content related to diet and exercise often misleads users by promising quick fixes (e.g., "lose 50 pounds in 2 weeks") or claims that are too good to be true (e.g., "spot fat reduction" of problem areas). What role, if any, should social media platforms play in combatting such misinformation? How can public health professionals respond to get factual and comprehensive information in the hands of those who need it?

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