You got this, sis! Using Instagram to increase physical activity adherence and body satisfaction

Olivia Johnson, University of Houston & Desmond Delk, Langston University

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Programs and courses centered on educating about the benefits of health have been found to positively influence life-long physical activity engagement and health-enhancing behaviors of students (Casebolt, et al., 2017; Chandler et al., 2022). These findings show promise in the fight to address serious health risks; however, health inequities within Black and Brown communities still exist at disparate proportions as 56.9% of Black women are considered obese whereas 43.7% of Hispanic women assume that same designation (Hales, 2020). "Scholars of digital critical studies have developed a rich understanding of the interplay between identity and technology" and uncovered the impact of digital spaces on identity, especially as it relates to marginalized populations (Musgrave et al., 2022, p. 1). Although these spaces are seemingly hostile to Black and Latina women, they frequently use social media platforms as a medium to connect to content that can initiate and support lifestyle changes and/or improvements such as decisions related to physical health. Recent studies examining social networks and fitness used activity trackers to collect health indicators while utilizing social media networks (e.g., Instagram, Twitter) to serve as a means of connecting participants and delivering content (Chung et al., 2017; Curtis et al., 2020). However, those approaches are limited in that the social support was one-way (text message) and posts were generally instructive and not community oriented. Community and social support are integral in enhancing the health of Black and Latina women as they represent core principles of collective cultures. Moreover, mainstream social media content geared toward physical adherence lacks the sociocultural norms of marginalized populations (Joseph et al., 2017). Social Identity Theory (SIT) proposes that individual's self-concept and self-esteem are derived from perceived membership within social groups. Using SIT as a theoretical framework, this research seeks to explore the influence of culturally relevant Twitter spaces on behavior specifically as it relates to physical activity adherence.

Literature Review: Literature suggests social identities are factors in behavioral changes related to health, given health boosting behaviors are inspired by collectively formed social identities (Campbell & Jovchelovitch, 2000). Furthermore, understanding individuals' health identities and increasing their sense of belongingness boosts participation in exercise (Dailey & Zhu, 2016). Joseph et al. (2015) explored the utilization of a culturally relevant Facebook and text-message health promotion intervention on African American women. The authors found positive increases in both physical activity and psychosocial outcomes such as social. When people

participate in friendly social interaction, they perceive tangible or intangible social support (Chun & Lee, 2017). For instance, on Instagram, users may perceive a sense of support if their posts receive likes, replies, or retweets. As such, users develop a sense of belonging to social networking sites (SNS) via managing personal relationships and developing feelings of membership, identification, and "shared socio-emotional ties as a result of continued exposure and usage of the system" (Lin et al., 2014, p. 596). Previous research suggests higher social media use leads to higher comparisons and ultimately lower body satisfaction (Jarman et al., 2021). However, we posit that social support obtained from the Instagram group will lead to higher body satisfaction among Black and Latina college aged women.

Proposed hypotheses: H1: Sense of belonging influences a) self-efficacy to resisting relapse and b) self-efficacy to making time for exercise. **H2a**: Self-efficacy to resisting relapse influences body satisfaction. **H2b**: Self-efficacy to making time for exercise influences body satisfaction. **H3**: Sense of belonging will have greater effects on a) self-efficacy to resisting relapse and b) self-efficacy to making time for exercise for participants in the social support group.

Methods: This study employed an experimental design with 2 groups of support (in the support group, not in support group) as the between-subjects factor. All participants were asked to follow the fictious Instagram page, *Active for the Culture*. Participants were randomly assigned to a group with one group engaging in a daily chat on Instagram. Additionally, participants were given Garmin trackers and asked to take weekly surveys for four weeks to assess their experiences with the Instagram page. At the end of the four weeks, participants completed a final survey and focus group interview. A total of 90 participants were recruited from a large Hispanic Serving Institute and a small Historically Black College and University. A total of 75 usable surveys were analyzed and all measures were rated on 5-point Likert scales.

Results. Exploratory factor analysis (EFA) confirmed that all variables in the conceptual model were unidimensional. All measurement items loaded above 0.50 on each corresponding variable, and Cronbach's alpha values were 0.85 or higher, confirming reliability (Hair et al., 2009). To test the hypotheses, a customized model featuring moderated mediation in SPSS PROCESS macro v4.2. (Hayes, 2018) was conducted using bootstrapping methods with 5,000 random samples. The results show that sense of belonging had a significant effect on self-efficacy to making time for exercise (b = 0.2264, t = 2.9621, p = 0.004) and self-efficacy to resisting relapse (b = 0.1383, t = 2.096, p = 0.039), supporting **H1(a)** and **H1(b)**. Self-efficacy to making time for exercise had a significant effect on body satisfaction (b = 0.6177, t = 3.5493, p = 0.000) however, the effect from self-efficacy to resisting relapse was not significant (b =- 0.1041, t = - 0.6934, p = 0.490), supporting **H2b** but not **H2a**. Furthermore, analysis revealed self-efficacy to making time for exercise mediated the relationship between belonging and body satisfaction

(indirect effect=.0854, Bootstrapped SE=.0441, LLCI=.099, ULCI=.1808). The results revealed a non-significant interaction effect between sense of belonging and self-efficacy to resisting relapse (effect = 0.0900, SE = 0.1353, 95% CI = -0.1798; .3598) and self-efficacy to making time for exercise (effect = 0.2145, SE = .1552, 95% CI = -0.0950; 0.5241) by support group type, rejecting **H3a and H3b**.

       Implications. The ubiquity of social media's intertwinement in almost all aspects of life will continue into the foreseeable future. As such, it is imperative that we explore ways to incorporate social media platforms safely and effectively within the context of health education and promotion. Our target population of Black and Latina college women face some of the worse health disparities that can be mitigated by adopting a lifestyle centered on consistent physical activity engagement (Hales et al. 2017). Our findings support previous literature (Joseph et al., 2015) on the importance of cultural content on physical activity and ultimately body satisfaction. Although participants in the support group did not impact adherence, future research could examine whether support is reflected more in a participants emotional or psychological wellbeing. These results can impact planning, implementation and evaluation of initiatives aimed to increase health outcomes of minoritized communities that have been historically underfunded, underserved, and ignored.

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