

Interactive ritual chains: a study of sports netizen-led health media communication in short video platforms Postprint

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Abstract

With the rapid development of national fitness, the country has clearly promoted “Internet+fitness”, and many professional sports technicians have participated in live fitness activities and become sports web celebrities. Sports weblebrities are a powerful guarantee for improving the fitness level of the general public, and the health media activities led by them promote the audience’s willingness to exercise, resulting in a better communication effect. From the perspective of the interactive ritual chain, this paper investigates why the live broadcasts of sports weblebrities can promote the audience’s willingness to exercise through a questionnaire survey, examines the factors affecting their interactive effects through correlation analysis, and considers the development direction of personalising the live interaction of sports weblebrities. The study found that the more the sports weblebrities interacted with the audience in their live broadcasts, the more the audience’s attention to fitness, willingness to acquire fitness knowledge, and willingness to exercise increased. The study also found that the chaos that exists in the sports weblebrity industry can have a number of negative effects on health communication, which deserves our attention and reflection.

Full Text

Interactive Ritual Chains: A Study of Sports Influencer-Led Health Media Communication on Short Video Platforms

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Abstract: With the rapid development of national fitness initiatives, China has

actively promoted “Internet+fitness,” leading many professional sports practitioners to engage in live fitness activities and become sports influencers. These influencers serve as a powerful force for improving public fitness levels, and the health media activities they lead effectively promote audience willingness to exercise, resulting in superior communication outcomes. From the perspective of interactive ritual chain theory, this study investigates why live broadcasts by sports influencers can enhance audience exercise willingness through questionnaire surveys, examines factors affecting interactive effectiveness through correlation analysis, and explores directions for personalizing live interactions. The findings reveal that increased interaction between sports influencers and audiences during live broadcasts significantly enhances audience attention to fitness, willingness to acquire fitness knowledge, and motivation to exercise. However, the study also identifies concerning issues within the sports influencer industry that may negatively impact health communication, warranting critical attention and reflection.

Keywords: sports influencers, health communication, interactive ritual chain

1 Introduction

In August 2021, the State Council’s National Fitness Plan (2021-2025) explicitly proposed launching online scientific fitness lectures and encouraging sports stars and other professionals to participate in fitness science popularization activities. In 2022, Douyin launched a series of “Championship Fitness Classes” live broadcasts featuring professional athletes such as Su Bingtian. According to statistics, a single live broadcast attracted 660 million views, sparking widespread discussion among netizens. We observed that sports influencers’ live broadcasts effectively enhance audience willingness to exercise, with health media campaigns led by these influencers demonstrating superior communication effects. This raises two key questions: Why do health media campaigns led by sports influencers achieve better communication outcomes? And from the perspective of interactive ritual chain theory, why do these live broadcasts increase audience willingness to exercise?

2.1 Literature Review of Sports Influencers

Existing research has examined sports influencers from multiple perspectives. Foreign scholars Jordi Paniagua and Pawel Korzynski have analyzed social media interactions of sports stars, noting that social media expands their reach and directly affects their commercial and market value. KING has examined sports symbols in media through a gender discourse lens, highlighting how media emphasizes femininity by promoting physical attributes like health and slenderness. Gill Lines has studied media coverage of sports stars, demonstrating their potential to serve as role models for youth.

Chinese scholar Zhang Xiaoli has investigated the professional sports influencer phenomenon through the attention economy lens, showing that the value gen-

erated by sports influencers can strengthen interactive relationship networks between professional sports and mass consumers. Zhao Tingting has explored health communication strategies for sports influencers using grounded theory, suggesting that identifying sustainable competitive advantages can help address challenges in mass fitness. Zhou Wenlong and Yang Lu have offered both hot-takes and critical reflections on sports influencers from an entertainment perspective, arguing for continued exploration of healthy development pathways. However, while these studies examine the development of sports influencers, they neglect the communication effects of live sports influencer broadcasts specifically.

2.2 Literature Review of Interactive Ritual Chain Theory

Since Randall Collins proposed interactive ritual chain theory in the early 21st century, scholars worldwide have engaged with it extensively. Sociologist Keith R. Brown has supplemented the theory through research on ethical consumption, demonstrating how rituals and emotions mobilize consumers more effectively than identity appeals or coercive advertising. Seraj M. has enhanced the theory in micro-sociological interaction research by examining value creation in online communities and its role in generating emotion and energy. David Boyns and colleagues have contributed to emotional energetics scholarship by exploring the complex concept of emotional energy within interactive ritual chains.

Domestically, Fan Chuanguo and Deng Sisi have applied the theory to Bilibili's video platform, arguing that interactive communication behaviors among users form continuous cyclical interactive ritual chains. Gu Chudan has examined community interaction on Chinese social platforms, proposing that characteristics of interactive ritual chains vary directly with emotional energy strength. Yu Zhaochen has studied heritage tourism's role in promoting cultural identity, suggesting that constructing interactive rituals in this context can build national cultural identity and community consciousness. However, none of these studies examine sports influencer-led health media campaigns through the interactive ritual chain lens, leaving unanswered questions about why these live broadcasts drive audience exercise willingness.

2.3 Problem Formulation

This study therefore addresses the following questions from an interactive ritual chain perspective: Why do sports influencer-led health media campaigns generate superior communication effects? And specifically, why do live broadcasts by sports influencers increase viewers' willingness to exercise?

3 Research Methodology

This study employs questionnaire research to answer these questions.

3.1.1 Hypothesis Building

Based on our research questions, we propose the following hypotheses:

H1: The more sports influencers interact with viewers during live broadcasts, the more effective the communication of sports influencer-led health media campaigns.

H1a: Increased interaction between sports influencers and viewers during live broadcasts enhances viewer attention to exercise and fitness.

H1b: Increased interaction between sports influencers and viewers during live broadcasts strengthens viewer willingness to learn about sports and fitness.

H1c: Increased interaction between sports influencers and viewers during live broadcasts strengthens viewer willingness to exercise along with the broadcast.

To test these hypotheses, this study developed a comprehensive questionnaire.

3.1.2 Sampling Methods

Data collection, collation, and analysis were completed on February 27, 2023. The survey combined open-ended and closed-ended questions covering: (1) basic demographic information including age, gender, and occupation; (2) the extent of sports influencer-audience interaction during live broadcasts; and (3) viewer attention to exercise, willingness to acquire fitness knowledge, and motivation to exercise. The questionnaire comprised 16 items: 8 single-choice questions, 4 multiple-choice questions, 3 matrix questions, and 1 fill-in-the-blank question, distributed online through the Questionnaire Star sample bank.

After reliability and validity testing, the questionnaire was deemed suitable for investigating how sports influencer-audience interaction during live broadcasts affects viewer exercise motivation. A random sampling approach yielded 153 questionnaires, all of which were validated as complete responses, resulting in a final sample of 153 respondents.

4.1 Demographic Characteristics

4.1.1 Gender

Among the 153 respondents, 89 (58.17%) identified as female and 64 (41.83%) as male, representing a relatively balanced gender distribution.

4.1.2 Age

As an online survey distributed through Questionnaire Star, younger age groups were overrepresented. The sample included 14 respondents aged 18 or younger (9.15%), 30 aged 18-21 (19.61%), 58 aged 22-25 (37.91%), 15 aged 25-30 (9.8%), 18 aged 31-40 (11.76%), and another 18 aged 40 or older (11.76%).

4.1.3 Occupation

Given that exercise willingness may be influenced by available leisure time, the survey collected occupational data. Among respondents, 73 were university students (47.71%), 40 were office workers (26.14%), and 14 were junior or senior high school students (9.15%). The remaining respondents included freelancers, homemakers, entrepreneurs, and others.

4.1.4 Geographic Location

Respondents were distributed across various provinces, with Guangxi, Sichuan, Beijing, and Henan representing the highest proportions of the sample.

4.2 Audience Engagement with Sports Influencer Live Broadcasts

Beyond demographic analysis, this study examined respondent behavior regarding sports influencer live streams, including followership patterns, viewing frequency, and preferred influencers.

4.2.1 Followership of Live Online Fitness Activities

The majority of respondents (65.36%) reported “following but not regularly participating” in live fitness activities, while 37 respondents (24.18%) “follow and regularly participate.” Only 16 respondents (10.46%) did not follow live online fitness content.

4.2.2 Sports Influencers Followed by Respondents

To identify specific influencers followed, the survey included top-ranked live sports influencers from major platforms. Liu Hong received the highest attention at 78.83%, followed by Pamela (64.23%), Saturday Wild (40.88%), and Ouyang Chunxiao (32.85%). Research indicates that Liu Hong primarily conducts live streaming fitness sessions, while the other three influencers are better known for their short video course series. Notably, despite Pamela’s widely praised professional credentials as a certified fitness instructor, her live streaming response rates are lower than Liu Hong’s, who began live streaming later.

4.2.3 Motivations for Following Sports Influencers

To understand how influencer-audience interaction affects exercise motivation, the study analyzed initial followership motivations. “Getting in shape” was the primary motivation (99 respondents, 72.26%), followed by “improving sports skills” (48.18%) and “gaining fitness knowledge” (45.26%). These results indicate that most respondents possessed at least some initial exercise intention when they began following sports influencers.

4.2.4 Frequency and Duration of Live Broadcast Viewing

The influence of live sports broadcasts on exercise willingness relates to viewing frequency and duration. On average, 65 respondents (47.45%) watched sports influencer live broadcasts 1-2 times per week, 36 (26.28%) watched less than once weekly, and 30 (19.71%) watched 3-4 times weekly.

Regarding viewing duration, 36.5% watched an average of 15-30 minutes per week, 34.41% watched less than 15 minutes, 21.17% watched 31-45 minutes, and only 2.92% watched more than 60 minutes. These patterns suggest relatively low audience stickiness to sports influencer live broadcasts.

4.3 Impact Analysis of Live Interactive Behaviors

4.3.1 Exercise Tendencies Before and After Viewing

To examine how different interaction types affect exercise willingness, we first assessed pre-viewing exercise habits. Prior to watching live broadcasts, 63.5% of respondents exercised occasionally, while 20.44% had no exercise habits. A follow-up survey revealed that after viewing, 70.8% “occasionally follow along with workouts,” while only 15.33% reported no change. This demonstrates that sports influencer live streams have indeed motivated some viewers to exercise online.

4.3.2 Interaction Frequency with Live Broadcast Presenters

Unlike traditional fitness videos, live fitness broadcasts offer stronger companionship and interactivity. Before examining interaction types, we analyzed interaction frequency. On average, 51.09% of respondents interacted 1-3 times per live program, 36.5% interacted less than once, and 23.36% averaged 3-4 interactions per program, indicating relatively low overall interaction frequency.

4.3.3 Live Streaming Interaction Behaviors and Preferences

Sports influencer live broadcasts feature both generic interactive behaviors (e.g., bullet comments, discourse exchange) and fitness-specific interactions (e.g., guided practice companionship, fitness knowledge sharing). Knowledge popularization was the most common interaction type (59.85%), followed by practice accompaniment (59.12%), discourse encouragement (48.91%), and bullet chat interaction (48.91%). Anchor experience sharing was less common (22.63%), indicating that sports influencer interactions are relatively specialized with high fitness-related content.

The study also examined interaction preferences. Respondents rated practice accompaniment and knowledgeable science highest (both approximately 3.9/5), followed by words of encouragement (3.8) and experience sharing (3.72). Notably, while bullet chat interaction is ubiquitous in live broadcasts, audience

preference for it was very low. Conversely, experience sharing—highly valued by audiences—was underrepresented in actual broadcasts.

4.3.4 Impact of Live Interactive Behaviors

Following analysis of interaction behaviors and preferences, we examined their impacts. After interactive experiences, audiences reported the strongest “desire to follow sports and fitness” (mean score 4.01/5), followed by “desire to gain fitness knowledge” (3.88) and “desire to work out with the presenter” (3.82). Preferences for interacting with the presenter and sharing with others were lower, suggesting audiences view live streaming as a personal information domain rather than a communicative space, showing resistance to interaction patterns common in other live broadcast genres.

4.3.5 Real-Life Impact of Sports Influencer Live Broadcasts

Sports influencer live broadcasts demonstrate potential to motivate real-world exercise behavior. “Increased attention to body data and health status” received the highest score (4.08/5), indicating that body index awareness represents the most significant impact. This was followed by “healthier and more effective lifestyle” (3.96), suggesting self-identity enhancement, and “increased motivation to participate in exercise” (3.9). However, “promoting communication among fellow sports enthusiasts and inspiring passion for life” scored lower, reflecting limited community building in current sports influencer live broadcasts—a potential area for future development.

The real-life impact of sports influencers’ live broadcasts

4.3.6 Personalized Feedback on Sports Influencer Interactions

Given the personalized nature of live sports influencer communication effects, we collected respondent opinions and suggestions, summarized in a word cloud analysis. Viewer feedback primarily concerned influencer professionalism, with frequent requests for “more professional” content and detailed guidance such as “action analysis,” “strengthening standardized movements,” “movement explanation,” “more knowledge,” “strength explanation,” and “more supervision.” Because fitness is intimately connected to individual physical condition and fundamentals, viewers requested more refined content including “targeted live sessions” and “detailed demonstrations.”

Regarding direct interaction, viewers desired “more continuous encouragement” and expected bullet chat interaction from presenters, but without excessive noise or overwhelming chat screens. They rejected product promotion but welcomed recommendations for “suitable fitness equipment.” For broadcast settings, viewers suggested outdoor sessions, advance notice of exercise schedules, and improved operational maintenance.

5 Summary and Reflection

This study applies interactive ritual chain theory to examine why sports influencer-led health media campaigns achieve superior communication effects, and why these live broadcasts increase audience exercise willingness. The findings demonstrate that increased interaction between sports influencers and audiences significantly enhances audience attention to fitness, willingness to acquire fitness knowledge, and motivation to exercise. This occurs because viewers become more attentive to their body indices through influencers' knowledge sharing, experience self-identity enhancement from encouraging discourse, and gain motivation through direct interaction.

These results suggest that sports influencer-led health media campaigns can achieve effective communication outcomes, reflecting the rapid development of national fitness movements in the new era while contributing to continuous improvement in national physical literacy. However, the study also identifies concerning phenomena including influencer unprofessionalism, pseudoscience dissemination, anxiety creation, blind audience imitation, and mechanical platform regulation, all of which negatively impact health communication. The serious homogenization of online fitness content, exercise-related injuries from audience imitation, and commercial exploitation of trending topics all warrant vigilance and reflection.

This study is limited by its lack of universality, precision, and depth, as participants primarily represent middle-aged and younger groups with relatively low engagement stickiness. Future research on sports influencer-led health media campaigns should expand sociological investigation to include older populations and address the phenomenon of low audience participation in fitness live streaming, while broadening research and practice in the live sports fitness ecosystem.

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Note: Figure translations are in progress. See original paper for figures.

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