

Awareness through Social Media Promoting Sports Injury Prevention and Healthy Lifestyle in University Coaches and Athletes¹

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Abstract

The growing integration of social media with health and education programs has created new opportunities to address concerns related to college students' athletics. This study aimed to investigate how social media may help university coaches and players in Faisalabad become more aware of and educated about sports injury prevention and the promotion of healthy lifestyle. The population of the study was both university athletes and coaches. A survey questionnaire was handed over to total of 150 participants including (n=120) athletes and (n=30) coaches to complete and participate in social media-based awareness initiatives. Participants' knowledge, attitudes, and practices were compared before and after the intervention using descriptive statistics, paired samples t-test, and One-Way ANOVA. The findings demonstrated a substantial improvement in athletes and coaches' awareness and preventative actions following exposure to social media-based instructional content. While, the athletes revealed knowledge about safe training techniques, diet, and

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lifestyle management. Coaches reported feeling more confident in their ability to lead injury prevention programs. The findings demonstrated social media's potential as a useful, approachable, and engaging platform for sports injury prevention and health education. This study emphasized the need to integrate digital platforms into university-level health promotion initiatives to support safer sporting environments and the long-term health of student-athletes and coaches.

Keywords

Social Media, Sports Injury Prevention, Healthy Lifestyle, Coaches, Athletes.

Introduction

University athletics has significant positive effects on social, emotional, and physical health, but it is also linked to a high rate of avoidable musculoskeletal injuries. Evidence from both domestic and international sources indicated that university athletes often sustain injuries. Pakistani studies, for example, emphasize the necessity of organized instruction on safe participation and technique among female university students (Memon et al., 2018). Coaches played a crucial role in putting evidence into practice by teaching technique, load management, and warm-up adherence. However, research showed that only a small percentage of coaches regularly implement injury-prevention programs, frequently because of contextual barriers like time, resources, and perceived fit as well as knowledge and motivation (Hawkinson et al., 2022).

Nowadays, physical inactivity is a major public health issue. A rise from 2010 to 2022, one-third (31%) of individuals did not achieve recommended levels of physical activity highlighting the need for scalable and population-level measures to encourage mobility and prevent non-communicable diseases (NCDs). Sport can serve as a preventative measure against inactivity and the risk of NCDs in university communities as long as injuries are avoided and healthy lifestyles are promoted (World Health Organization, 2024).

Formative research, audience segmentation, and behavior-change strategies are the foundations of social marketing and digital campaigns that can influence health habits. These strategies can be used in campus settings to reduce sports injuries and promote healthy lifestyles (Roger et al., 2023). The effectiveness of social media education aimed at Pakistani university coaches and athletes in promoting healthy lifestyle choices and injury prevention is not well supported by local data. Second, even though coaches are acknowledged as safety leaders, adoption hurdles to injury-prevention techniques may be addressed by coach-focused toolkits, peer examples, and social media micro-learning.

Pakistani university students' levels of digital health literacy vary suggesting that content design such as using clear language, reliable sources, and concrete steps is essential for effectiveness and equity (Farooq, Imran, & Imran, 2024). University athletes' participation in sports is increasingly acknowledged as a vital aspect of promoting physical health, teamwork, and overall well-being. However, a high incidence of sports-related injuries often occurred due to intense training, inadequate supervision, and a lack of knowledge about injury prevention techniques (Emery & Pasanen, 2019). Being actively

involved in the athletic environment, coaches and athletes are essential in promoting healthy lives and safe practices. Regrettably, preventable injuries and long-term health effects are frequently caused by gaps in knowledge and preventative efforts (Wiebe & Karbach, 2017).

Social media has been a potent instrument for raising awareness, educating people, and communicating about health in recent years. Social media sites like Facebook, Instagram, Twitter, and YouTube are frequently used to spread knowledge, support health initiatives, and involve viewers in interactive education (Moorhead et al., 2013). Social media's interactive features not only made it possible for injury prevention techniques to be shared quickly, but they also promoted behavior change by encouraging peer support and ongoing participation (Hou, Charlery & Roberson, 2018).

Social media digital interventions in sports can be accessible and affordable ways to encourage young athletes and their coaches to lead healthy lives and preventative habits (Price, 2018). Students' involvement in sports has steadily increased in the city of Faisalabad which is home to several higher education institutions. Nonetheless, coaches and players continue to have a low level of knowledge about injury prevention and good lifestyle choices. Long-term health outcomes and performance optimization are seriously hampered by this ignorance. Because, they offered both structured athletic programs and the chance for early health interventions, university environments are perfect for conducting preventive education (Safdar et al., 2025).

Social Media as Health-Promotion Platform in Sports

Athletes, sport teams, and coaches now all are using social media platforms (such as WhatsApp, Facebook/Instagram, and X) for communication which makes it possible to quickly and affordably share training, recuperation, and health-related communications. Media consumption and sports participation habits are positively correlated indicating that well-crafted digital material can encourage physical activity which is a crucial component of injury prevention and good lifestyle choices (Tian, Yang, & Zhang, 2023). Exercise-based injury-prevention information is widely available in sport according to evaluations of websites, although its quality and readability vary. This emphasized the necessity for coach-mediated and evidence-based messaging (Mącznik, Mehta, & Kaur, 2021).

Athletes, coaches, and the general public are increasingly using social media to encourage healthy lifestyles, injury prevention, and mental well-being. Its usage in sports went beyond fan interaction and branding (Breslin & Leavey, 2019). Social media-based health promotion initiatives are scalable and reasonably priced enabling focused campaigns that can connect with a wide range of demographics despite socioeconomic or geographic constraints. This is especially important since the physical and mental demands of competition can put athletes at greater risk for injury, burnout, and lifestyle-related health problems (Williams et al., 2021).

Social media facilitated peer support and the exchange of personal stories which can strengthen healthy habits and increased compliance with wellness or injury prevention initiatives (Naslund et al., 2016). Social media initiatives encouraging physical exercise and a healthy diet have demonstrated encouraging outcomes in raising awareness and encouraging engagement in better behaviors among young athletes and students (Vaterlaus et al., 2015). Sports groups and coaches have also realized

how social media helps spread the word about mental health concerns, lessen stigma, and promote candid conversations (Purcell et al., 2023).

Social media is a vital tool for health promotion in sports because of its influence, accessibility, and engagement which helped to close the gap between evidence-based information and real-world implementation. Nevertheless, despite its enormous potential, problems like false information, gaps in digital literacy, and excessive screen time must also be recognized and resolved. This article examined social media's potential as a platform for health promotion in sports, weighing the advantages, difficulties, and ramifications for players, coaches, and sports communities (Oh et al., 2022).

Social Media and Injury-Prevention Education

Social media platforms can increase awareness and influence safety behaviors, according to an integrated review of social media for injury-prevention education. However, their efficacy is dependent on engagement strategies, customized targeting, and trustworthy multimedia interactions. This encouraged university teams to use coach-endorsed resources and standardized content schedules (Zazzera, 2020). Emerging intervention studies showed that risk-reduction outcomes occur when digital platforms provided university athletes with universal, developmentally appropriate information (e.g., warm-up routines, load management, recovery behaviors), and a protective impact on injuries when teenagers had continuous access to health information through a digital platform (Jacobsson et al., 2023).

Conventional injury prevention initiatives often relied on in-person seminars, pamphlets, and institutional campaigns; although successful, these strategies had limitations in terms of durability and reach (Donovan et al., 1995). These initiatives have been transformed by social media, though, which offers dynamic, real-time communication that promotes community support and peer involvement (Ventola, 2014). Research showed that when athletes and coaches are exposed to instructional information via digital platforms, they are more likely to take preventative action since these methods align with their regular media consumption patterns (Chan et al., 2020).

Social media campaigns have been successful in promoting evidence-based practices including concussion awareness, warm-up exercises to prevent musculoskeletal injuries, and lifestyle changes to reduce the risk of chronic diseases. This demonstrated social media's potential as a platform for increasing awareness as well as an intervention technique that encourages sustained behavioral change in injury prevention. A sustainable and scalable strategy to lower injury rates in sports and physical activities may be created by incorporating social media into injury-prevention education to close the gap between at-risk groups and medical professionals (Gavarkovs, Burke, & Petrella, 2017).

Digital Interventions for Healthy Lifestyle in University Students

Digital health interventions, whether provided through applications, online portals, or social media, can promote better diets and physical exercise among college students, according to recent syntheses. In line with the behavior goals of healthy campus efforts, a 2024 comprehensive assessment showed significant gains in steps/day, moderate-to-vigorous exercise, inactive time, and diet quality (Singh et al., 2024). Additionally, a review of chronic conditions revealed improvements in physical function,

although adherence and minor adverse events required attention. The study supported coach-supported, time-limited, organized programs with safety reminders and monitoring (Bi et al., 2024).

Research indicated that self-monitoring, motivation, and adherence to health-promoting habits can all be enhanced by digital health treatments. For example, it has been demonstrated that mobile health (mHealth) apps improve young adults' levels of physical activity, promote balanced meals, and lessen their sedentary behavior (Parua et al., 2024). University populations have shown improved results from online mental health programs in terms of reduced stress and anxiety (Harrer et al., 2019). These results highlighted the potential of digital interventions as scalable and long-lasting instruments for health promotion in higher education settings.

Coaches' Roles with Coach-Athlete Digital Ecosystem

Technical training, motivation, tactical planning, and psychological support are all emphasized in traditional definitions of coaching. However, contemporary research showed that coaches now also serve as digital educators, content creators, brand managers, data interpreters, and online advocates for athlete well-being. Studies indicated that coaches have a responsibility to exemplify professional digital behavior and align their online communications with their coaching objectives, such as athlete development or safety (Kirkland & Cowley, 2023).

Digital coaching is defined as a real-time, digital technology-enabled interaction that changes the coaching environment and sometimes the pace, while still preserving many human-centered coaching skills like questioning, listening, and providing feedback. This revised perspective suggested that in addition to sport-specific expertise, coaches must also develop digital-specific skills such as platform literacy, remote feedback techniques, and asynchronous program design (Bennett & Szedlak, 2024).

Digital coaching may increase access to knowledge, cross-border mentorship, and enhance technical learning (video analysis, remote exercises). Sport social media study reviewed caution the impacts vary and are influenced by platform administration and affordances (Abeza, 2023). An increasing number of coaches are part of a performance team that extends into social media, where they monitor how these platforms influence athletes' identities, motivation, and habits.

Recent qualitative research highlighted the importance of coach literacy, guardrails, and message discipline, noting both persuasive benefits (reach, relatability, peer modeling) and challenges (distraction, image management). Content-analysis studies suggested that how coaches frame and promote content on team channels can influence engagement and perceived norms for training and wellness materials (Gorrell, 2025). Practical coaching recommended that coaches provided health advice to student-athletes in ways that align with safeguarding and ethical rules, platform-specific content, and clearly defined goals, timelines, and community guidelines (Gorrell, 2024).

Pakistani Context and University Athletes

Although it is still in its infancy, the data showed that social media used is widespread among Pakistani university students and that there are significant connections between platform use and health-related issues. Participating in sports may help prevent social media addiction and enhance life happiness. This is helpful leverage for establishing offline first behaviors while still utilizing social media for support

and reminders. At Pakistani universities, there is still a dearth of well-examined, sport-specific social media interventions, especially those that track injury outcomes and verified lifestyle indicators (Ashraf et al., 2022).

Risks, Ethics, and Safeguards

Digital platforms exposed consumers and participants to a variety of dangers such as psychological injury, disinformation, and privacy infringement. The abuse of personal data is one of the most urgent issues since social media platforms frequently gather and share sensitive information without sufficient user understanding (Lupton, 2014). Misinformation about health spreads quickly on the internet and negatively affects behavior and decision-making (Chou et al., 2018). The mental health and body image of athletes can be adversely affected by excessive exposure to unreasonable performance demands and fitness ideals in the context of sports and physical exercise (Vaterlaus et al., 2015).

Fairness, autonomy, secrecy, and informed consent are the main focuses of ethical concerns. Transparency in data collection and usage must be guaranteed while doing research using digital marketing or social media (Moreno et al., 2013). The digital gap, where uneven access to technology can worsen inequities in health education and interventions, is another topic of ethical discussion. Making sure coaches and athletes are not forced to participate and that treatments consider cultural sensitivity is crucial in sports research and practice (Jones et al., 2012).

Researchers and practitioners suggested a number of precautions to reduce hazards and preserve ethical norms. Strong data security procedures, ethical review procedures, and professional and user training in digital literacy are important tactics. Maintaining secrecy required safe storage methods, data anonymization, and clear privacy regulations (Hutton & Henderson, 2017). Digital research procedures are still guided by ethical frameworks like the Belmont Report's three guiding principles: beneficence, fairness, and respect for humans.

Monitoring false information and disseminating reliable, fact-based content are essential precautions in the context of social media interventions to preserve the welfare of the general population (Waszak et al., 2018). Social media may help spread preventive messages but athletes, particularly women, are more vulnerable to online abuse, and organizations sometimes do not have strong protection procedures in place. Alongside health information, campaigns should incorporate reporting channels, moderation, and education on digital wellness (such as how to handle phubbing and its effects on mental health). Adoption and sustainability need to include these safeguards (Schultz, 2024).

Methodology

This study employed a quantitative research technique augmented by qualitative observations to assess the effectiveness of social media as a tool for teaching and raising awareness among Bahawalpur's university coaches and players about sports injury prevention and healthy lifestyles. The technique was designed to assess behavioral change and knowledge enhancement after exposure to educational information based on social media.

Research Design

A quasi-experimental pre-test and post-test approach was employed to evaluate the efficacy of a social media awareness-raising effort. Over the course of 8 weeks, participants were exposed to organized health-promotion content posts, videos, and infographics published on social media websites including Facebook, Instagram, and WhatsApp. Questionnaires measuring changes in knowledge, attitudes, and behaviors pertaining to injury prevention and lifestyle management were given out before and after the intervention.

Population and Sampling

The target demographic consisted of athletes and university coaches who were enrolled in Pakistan's higher education institutions in Faisalabad. Participants, who were active on social media sites including Facebook, Instagram, and WhatsApp, were sought out using a purposive sample strategy. Purposive sampling was used to choose 150 participants including (n=120) athletes and (n=30) coaches were selected.

Inclusion Criteria

- Participate actively in university athletic events
- Regularly use social media sites
- Give your informed permission

Data Collection Instrument

A standardized survey questionnaire was created based on prior research and approved by specialists in sports sciences and health promotion was used to gather data. The questionnaire was divided into four parts. Age, gender, sport, and training level are examples of demographic data. Sports Injury Prevention Knowledge (15 multiple-choice and true/false items), Healthy Lifestyle Practices (10 Likert-scale questions on nutrition, exercise, and sleep hygiene), Social Media Perceptions as a Tool for Health Promotion (8 items, 5-point Likert scale) to verify dependability.

Intervention Procedure

A restricted WhatsApp group and Facebook page created especially for the study were used in an eight-week social media awareness campaign. Among the instructional materials were: Infographics on injury prevention and brief awareness films and animations showed safe training techniques, warm-ups, and cool-downs. Posts on nutrition, rest, stress management, hydration, healthy living advice, and physical activity routines; engage in Q&A sessions with sports science specialists through WhatsApp groups. It was encouraged for participants to engage with the content, share ideas, and discuss challenges.

Data Collection Procedure

Pre-Testing: The baseline questionnaire was filled out by participants before the intervention.

Intervention Phase: For 8 weeks, the participants interacted with instructional information on social media.

Post-Test: After the intervention, the same questionnaire was given again to gauge improvements in knowledge, awareness, and lifestyle choices.

Data Analysis

The Statistical Package for the Social Sciences (SPSS V-27) was used to examine quantitative data. Responses and participant demographics were summed together using descriptive statistics (frequency, percentage, mean, and standard deviation). Knowledge and practice differences before and after the intervention were assessed using inferential statistics (paired samples t-test and ANOVA). The impact of social media in promoting health was determined by thematically analyzing participants' qualitative input.

Results

Demographic Characteristics of Participants

There were 150 participants in all, 120 of whom were athletes (80%) and 30 of whom were coaches (20%). To assess the success of social media-based awareness and education initiatives about preventing sports injuries and encouraging healthy lifestyle, the data was examined.

Descriptive Statistics

The participants' demographic information and descriptive data are included in Table 1. The average age of instructors was 34.6 ± 5.1 years, whereas, the average age of athletes was 21.8 ± 2.4 years. Both groups' pre-intervention general awareness ratings were lower than their post-intervention values.

Table 1: Descriptive Statistics of Participants (n=150)

Variable	F	Percentage	M±S
Age			25.2± 4.8
Athlete's	120	69%	
Coaches	30	74%	
Awareness Score (Pre)			58.2± 9.2
Awareness Score (Post)			76.4± 7.2
Lifestyle Score (Pre)			60.2 ± 7.4
Lifestyle Score (Post)			79.2 ± 6.4

Paired Samples t-Test

The mean scores before and after the social media-based intervention were compared using a paired samples t-test. Among athletes, lifestyle ratings increased statistically considerably ($t = 21.16$, $p < 0.001$) and awareness scores improved significantly ($t = 18.42$, $p < 0.001$). Coaches showed a substantial improvement in their awareness ($t = 9.23$, $p < 0.001$) and lifestyle ($t = 10.15$, $p < 0.001$) measures as displayed in Table 2.

Table 2: Paired Samples t-test (n=150)

Group	Variable	Pre (Mean \pm SD)	Post (Mean \pm SD)	t-Value	p-Value
Athletes	Awareness Score	57.23 \pm 8.8	75.6 \pm 7.3	18.43	<0.003
Athletes	Lifestyle Score	59.8 \pm 8.6	78.9 \pm 7.9	21.17	<0.001
Coaches	Awareness Score	61.5 \pm 9.4	79.4 \pm 9.8	9.24	<0.002
Coaches	Lifestyle Score	62.3 \pm 7.8	81.2 \pm 6.8	10.16	<0.001

*p < 0.05

One-Way ANOVA

Since, there were no significant differences between athletes and coaches in terms of increases in awareness and lifestyle ratings, a one-way ANOVA was performed. The findings showed that post-intervention awareness scores varied significantly between groups $F(1,148) = 4.67$, $p = 0.033$. Compared to athletes, coaches revealed somewhat greater increases. The groups also differed substantially in their post-intervention lifestyle ratings $F(1,148) = 5.21$, $p = 0.024$) as seen in Table 3.

Table 3: One-Way ANOVA between Groups (n=150)

Variable	Df	F-value	p-value
Awareness Score	1,148	4.67	0.033*
Lifestyle Score	1,148	5.21	0.024*

*p < 0.05

The understanding and healthy lifestyle habits of Faisalabad's university coaches and players were greatly enhanced by social media-based awareness initiatives. In both areas, coaches outperformed players, presumably as a result of their higher baseline accountability and professional involvement in health education. The intervention was a low-cost and successful way to increase awareness about injury prevention and encourage health-conscious behavior.

Discussion

This study investigated the potential benefits of a structured social media education campaign for raising knowledge of sports injury prevention and encouraging better lifestyle choices among Faisalabad University players and coaches. The possibility and potential efficacy of using social media platforms to provide succinct, visually appealing, and shareable prevention messages in university athletic settings are supported by the overall pattern of findings, improvements on awareness and preventive-behavior indicators from pre- to post-intervention and between-group differences favoring coaches on policy/oversight items but athletes on self-care items.

The findings add to a growing body of research showing that when material is offered at scale, is credible, targeted, and engaging, social media may have a beneficial impact on health knowledge and behavior (Chen & Wang, 2021). The findings are consistent with integrative and systematic studies that demonstrate the potential of social media to increase awareness about injury prevention and to effectively broadcast and activate safety behaviors (e.g., equipment use, warm-up compliance, and

concussion identification). The current findings provided background from a South Asian higher-education cohort, a setting that has been under-represented in the literature, even though previous evaluations have shown potential along with variety in quality and consistency of effects (Zazzera, 2020).

The combination of social evidence, repeated signals, and the accessibility of social media platforms made sense as a mechanism for the changes that have been seen. We incorporated these characteristics into our delivery strategy because, in accordance with WHO guidelines on digital health, timely, user-centered treatments that are integrated with current processes (e.g., coach announcements, team chats) are more likely to be accepted and scalable.

The infographic and short-form video components probably promoted microlearning and lessened cognitive load which is in line with best practices for digital health communication (Guideline et al., 2019). Maintaining progress seems to be mostly dependent on the coach-athlete ecology. Research showed that coaches have an impact on athletes' health-related behaviors and that higher levels of coach education and leadership are associated with improved athlete outcomes and environments that support health. Parallel content tracks may maximize effect, since us between-group patterns coaches gaining in policy/oversight knowledge and athletes in personal preventative actions that reflect this separation of responsibilities.

New research also showed that implementation fidelity is impacted by coaches' own health and health-promotion competencies, which is a crucial factor for programming in the future (Langan et al., 2013). Pakistani university students used social media extensively, but digital health literacy varied widely; it is vital to adapt information to local platforms, language, and literacy levels. Reach and comprehension were probably increased by our use of simple language, culturally appropriate images, and subtitles in Urdu and English.

However, disparities in digital health literacy might mitigate the impact of interventions, highlighting the necessity of short-term upskilling to assess the reliability of sources included in campaigns (Tariq et al., 2020). The results supported recent sport-specific research that demonstrates how health communication through sports social media may influence attitudes and intentions about safety and participation, especially among young people and kids, who make up the majority of our sample. It probably needs booster material, cues, and integration with on-ground coaching routines to translate attitude adjustment into long-lasting behavior, regular warm-up adherence, sleep hygiene, and safe training loads (Chen et al., 2025).

The utilization of standardized pre-post assessments, parallel coach/athlete tracks, and a real-world university athletics context are among its strengths. A single-city sample, short follow-up, and dependence on self-report are some of the limitations; social media metrics were not experimentally connected to individual outcomes. Online injury-prevention resources continue to vary in quality and readability; implementing consistent branding and selecting content from reputable sources could increase impact even more (Mącznik et al., 2021).

Conclusion

The results of this study demonstrated how social media may be a powerful teaching tool for raising awareness among Faisalabad's university players and coaches about healthy living choices and how to prevent sports injuries. Participants reported better understanding, improved preventative behaviors, and a stronger commitment to implementing healthier routines as a result of the use of digital platforms in health education efforts. This is consistent with other research showing the beneficial effects of social media campaigns on health awareness, participation, and behavior change among athletes (Biddle et al., 2007).

The results of the descriptive and inferential analyses demonstrated that social media-based treatments were beneficial to coaches and players alike with significant variations in the knowledge and behavioral intentions of the two groups. Athletes showed a higher reactivity to interactive and visually appealing social media content, while coaches, in their capacity as mentors, are essential in sharing health-related information and setting an example of preventative measures. These results supported the notion that digital platforms can empower users, close knowledge gaps, and lower the incidence of sports-related injuries (Leese et al., 2025).

Social media's potential for incorporation into university institutional structured for health promotion. In order to have the greatest possible impact, future projects should concentrate on maintaining engagement, customizing information for certain age and gender groups, and integrating online treatments with offline workshops. These findings might be further validated and added to a national plan for injury prevention and youth health promotion by extending the reach of similar interventions to additional Pakistani institutions.

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