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ORIGINAL RESEARCH

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Differences in sports activity participation and sports safety awareness based on the severity of an injury experienced among Korean men

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Abstract

This study aimed to identify differences in sports participation and sports safety awareness based on the severity of an injury experienced among Korean men. To achieve this, the data of 1484 men were extracted from the 2019 Sports Safety Accident Survey conducted by the Korea Sports Safety Foundation. We used data on the characteristics of the study population, variables related to sports participation (exercise frequency, duration, the use of dedicated sports facilities and the duration of injury treatment), and variables related to sports safety awareness (the awareness of sports safety rules, perceived importance of sports safety, completion of injury prevention training, and purchase of insurance with injury coverage). The collected data were analyzed using frequency analysis, one-way analysis of variance and Tukey's test (*post-hoc* test). The results showed that no differences existed in exercise frequency and duration depending on the severity of the injury experienced ($p > 0.05$), but there were differences in the use of dedicated sports facilities ($p = 0.010$) and the duration of injury treatment ($p < 0.001$). The results also showed that there were differences in the awareness of sports safety rules ($p = 0.004$), perceived importance of sports safety ($p < 0.001$), completion of injury prevention training ($p < 0.001$), and purchase of insurance with injury coverage ($p < 0.001$). Overall, the results showed that the severity of the injury experienced affects sports safety awareness among men who have experienced injuries. There is a need to provide education on sports safety and implement programs on sports injuries and sports safety to increase awareness of sports safety, especially among men who have not experienced a sports injury.

Keywords

Injury experience; Injury prevention; Physical activity; Safety awareness; Sports prevention; Sports safety

1. Introduction

Having a good experience and perception of sports during adolescence encourages individuals to continue participating in sports as adults [1]. In countries like Germany, Japan and the United States, school physical education includes daily physical activities to foster participation in physical activities during adolescence, and, consequently, lifelong participation in sports [2–5]. However, a relevant factor in long-term participation in sports is physical health [6]. Often, individuals suffer injuries while exercising. In the case of a minor injury, it is easy to return to exercise. However, in the case of a serious injury, it may be difficult to return. If an injury prevents participation in sports, these policy efforts and support will be of no use [7–9]. In the Republic of Korea, school sports clubs began to be active in elementary, middle and high schools in 2008, and various types of sports for adolescents are actively being made available [10].

For this reason, sports safety is being actively researched. Studies have suggested that with more participation in sports, there is a higher possibility of injuries not only in athletes but also among individuals who play sports recreationally [11–13]. Many studies have investigated why unintentional injuries occur in sports [14, 15]. They have shown that the occurrence of these injuries varies depending on the participants' degree of safety awareness and how well safety rules are followed [16, 17]. Currently, studies are being conducted to identify methods and strategies for preventing sports injuries [18, 19]. Overall, the need for sports safety is apparent. This issue transcends individual interest, as it is of national interest. Adams *et al.* [20] asserted that, for athletes to participate in sports consistently and safely, the government must implement policies, increase awareness and educate citizens about sports safety. Kim and Lee conducted a case study on sports safety management at an American university and reported that safety education should be regularly provided to students to prevent

injuries [21]. Additionally, they suggested that quick deployment of medical personnel can help manage emergencies effectively. Consequently, there has been a growing interest in sports safety education [22].

Sports injuries can be mild, allowing the individual to participate in sports within one or two weeks. Some injuries, such as sprains and ligamentous injuries, can delay one's return to sports activities for four to eight weeks. Meanwhile, serious injuries can cause a delay of 12 weeks or more [6, 8, 9]. Participating in sports at a dedicated sports facility can be an important factor in injury occurrence. Exercise frequency and duration are also variables that are closely related to the occurrence of injuries, as the more one participates in exercise, the more likely one is to suffer an injury. In addition, various factors related to sports safety awareness can have an impact on the prevention of injuries. For instance, the perception of safety rules, how important sports safety is considered, and receiving injury prevention education can impact injury prevention [23]. Anyone can participate in sports, regardless of sex. However, research on students at an African university shows that basketball sports participation and sports injury occurrences tend to be higher in males than in females [24].

This study analyzed whether sports participation and sports safety awareness differ based on the severity of the injury experienced among adult men. With this objective, we aimed to explore sports injuries and identify ways to prevent them. This study was conducted based on data from a survey on the actual condition of sports activities and sports safety awareness conducted by the Korea Sports Safety Foundation controlled by Korean Sports Council. The elements of these safety rules are data developed by the Korean Sports Council and consist of sports participation, safety awareness and safety accidents, and various safety-related studies that were being conducted every year through this survey [6, 16, 25, 26]. We determined differences in sports participation by investigating differences in exercise frequency, exercise duration, the use of dedicated sports facilities, and the duration of injury treatment based on the severity of the injury experienced. Differences in sports safety awareness were determined by investigating differences in the awareness of sports safety rules, perceived importance of sports safety, the completion of injury prevention training, and purchase of insurance with injury coverage. Accordingly, we posited the following research hypotheses.

Hypothesis 1. Exercise frequency, exercise duration, the use of dedicated sports facilities, and the duration of injury treatment differ depending on the severity of the injury experienced among adult men.

Hypothesis 2. The awareness of sports safety rules, perceived importance of sports safety, completion of injury prevention training and purchase of insurance with injury coverage differ depending on the severity of the injury experienced among adult men.

2. Materials and methods

2.1 Data collection

The data used in this study were obtained from the 2019 Sports Safety Accident Survey conducted by the Korea Sports Safety Foundation. The Korea Sports Safety Foundation investigates the status of sports injuries and determines their number and types based on the collected data. The 2019 survey was conducted from 20 September 2019, to 24 December 2019. It was administered to a nationally representative group of Korean men over the age of 20 years and investigated sports participation, sports safety awareness, and the severity of the injury experienced. We used the data of 1454 men in the Republic of Korea who had participated in the 2019 Sports Safety Accident Survey.

2.2 Variables

Among all questions in the Sports Safety Accident Survey, we selected those that fit the purpose of this study. We collected data on the characteristics of the study population, such as age, education level and household income. Regarding sports participation, we collected data on exercise frequency, exercise duration, the use of dedicated sports facilities and the duration of injury treatment. Regarding sports safety awareness, we collected data on the awareness of sports safety rules, perceived importance of sports safety, completion of injury prevention training and purchase of insurance with injury coverage. Table 1 presents the variables for which we collected data from the 2019 Sports Safety Accident Survey. It also presents the questions that were used to measure the variables.

2.3 Data analysis

Frequency analysis was performed to determine the characteristics of the study population. One-way analyses of variance were conducted to test the hypotheses. Subsequently, Tukey's tests were performed as *post-hoc* tests. A total of 1454 men were surveyed in the 2019 Sports Safety Accident Survey. The central limit theorem asserts that if a sample includes more than 30 measurements, the data has an approximately normal distribution and is reliable. Therefore, this study can be considered to have reliability and validity [27]. Statistical significance was set at $p < 0.05$. All statistical analyses were performed using SPSS (version 22.0; IBM Co., Armonk, NY, USA).

3. Results

3.1 Characteristics of the study population

Table 2 presents the characteristics of the study population. The average age was 42.65 ± 12.70 years. Most men had a college-level or higher education (87.7%). Many men had a household income (monthly) of USD 5000 or more (32.7%). Regarding the experience of injuries, mild injuries were the highest in number (37.5%), while 28.5% of the men had not suffered an injury. Regarding sports participation, most men exercised less than once a week (52%). On average, they exercised for 90.05 ± 69.32 minutes per session. Furthermore, most men used a dedicated sports facility to engage in sports activities (62.9%), and the injuries of many men healed in a week (29.7%). Regarding sports safety awareness, many men were somewhat aware of sports safety rules (48.6%). Most men considered sports safety very important (51%) and had

TABLE 1. Questions from the 2019 Sports Safety Accident Survey used to collect data for the study variables.

Variable	Question
Age (yr)	What is your chronological age?
Education level	What is your educational level?
Household income	What is your average monthly household income?
Exercise frequency	How often do you engage in sports activities (or exercise)?
Exercise duration (min/session)	On average, how much time do you spend performing a sports activity (or exercising)?
Use of dedicated sports facilities	Where do you usually engage in your sports activities (or exercise)?
Severity of the injury experienced	Have you ever experienced an injury during sports activities (or exercise)?
Duration of injury treatment	How long did it take for the injury to heal to the point where sports activities (or exercise) were not affected?
Awareness of sports safety rules	How much do you know about the safety rules of the sport (or exercise) you participate in?
Perceived importance of sports safety	How important do you think safety is during sports activities (or exercise)?
Completion of injury prevention training	Have you ever completed training on dealing with accidents or preventing injuries during sports activities?
Purchase of insurance with injury coverage	Do you have insurance or deductibles against sports (or exercise) injuries?

not completed injury prevention training (87.6%) or purchased insurance with injury coverage (80.3%).

3.2 Differences in sports activity participation based on the severity of the injury experienced among Korean men

Table 3 presents the differences in sports participation based on the severity of the injury experienced among Korean men. No differences were found in exercise frequency and duration ($p > 0.05$). However, the use of dedicated sports facilities ($p = 0.010$) and duration of injury treatment ($p < 0.001$) differed significantly.

3.3 Differences in sports safety awareness based on the severity of an injury experienced among Korean men

Table 4 presents the differences in sports safety awareness based on the severity of the injury experienced among Korean men. Significant differences were found in the awareness of sports safety rules ($p = 0.004$), perceived importance of sports safety ($p < 0.001$), completion of injury prevention training ($p < 0.001$), and purchase of insurance with injury coverage ($p < 0.001$).

4. Discussion

This study investigated whether sports participation and sports safety awareness differed based on the severity of the injury experienced among Korean men. We obtained several insightful results. First, we found there are some differences in sports participation based on the presence or absence of sports injuries and the degree of injury experienced. Men who had severe sports injuries had more injuries when they exercised in sports-specific facilities than when they exercised in other facilities. In contrast, minor injuries occurred more frequently exercising in facilities not exclusively meant for sports activities. These results support previous studies showing that elite athletes experience more serious injuries than individuals who play sports recreationally and that elite athletes have a greater awareness of sports safety [15, 28]. We also found that the more severe the injury, the longer it takes to return to activity. However, this result is difficult to generalize because previous studies have shown that it is difficult to return to sports activities, even if the injury is moderate or mild [7, 8].

Second, we found differences in the awareness of sports safety rules, perceived importance of sports safety, completion of injury prevention training and purchase of insurance with injury coverage based on the severity of an injury experienced among Korean men. It is noteworthy that men who had a high degree of sports safety awareness experienced severe sports injuries. This result contradicts the results of previous studies showing that having a high degree of sports safety awareness can help prevent injuries [22, 29, 30]. In the current study, the population consisted of men who were not professional athletes but rather men who played sports recreationally. Possibly recreational athletes participate in sports less often or for a shorter duration than professional athletes, but over 30% of our study population participated in sports more than twice a week. Our study population reported long-term (rather than short-term) participation in sports activities, with an average exercise duration of 90 minutes per session. We believe that our finding is reasonable, considering that more frequent or longer exercising increases the exposure to a potential injury.

Sports safety is important not just for athletes; it is important for everyone. Jo *et al.* [16] demonstrated that a higher awareness of sports safety, higher intention to complete safety education and sports safety awareness mediates the relationship between sports habits and the completion of sports safety education. Thus, for anyone participating in sports, an awareness of sports safety can encourage continued partici-

TABLE 2. Characteristics of the study population (n = 1454).

Variable	Categories	Frequency (percentage) or mean ± standard deviation
Age (yr)		42.65 ± 12.70
Education level		
	Middle school	6 (0.4%)
	High school	173 (11.9%)
	College or above	1275 (87.7%)
Household income (monthly)		
	Less than USD 1000	122 (8.4%)
	USD 1000 to less than USD 2000	94 (6.5%)
	USD 2000 to less than USD 3000	243 (16.7%)
	USD 3000 to less than USD 4000	274 (18.8%)
	USD 4000 to less than USD 5000	245 (16.9%)
	USD 5000 or more	476 (32.7%)
Exercise frequency		
	Everyday	175 (12.0%)
	4–6 d/wk	78 (5.4%)
	2–3 d/wk	246 (16.9%)
	1 d/wk	199 (13.7%)
	Less than 1 d/wk	756 (52.0%)
Exercise duration (min/session)		90.05 ± 69.32
Use of dedicated sports facilities		
	Yes	914 (62.9%)
	No	540 (37.1%)
Severity of the injury experienced		
	Severe	91 (6.3%)
	Moderate	404 (27.8%)
	Mild	545 (37.5%)
	No injury experienced	414 (28.5%)
Duration of injury treatment		
	No injury experienced	414 (28.5%)
	1 week	432 (29.7%)
	2–3 weeks	365 (25.1%)
	4–7 weeks	126 (8.7%)
	8 weeks or more	117 (8.0%)
Awareness of sports safety rules		
	Not at all aware	14 (1.0%)
	Slightly aware	196 (13.5%)
	Somewhat aware	706 (48.6%)
	Moderately aware	485 (33.4%)
	Extremely aware	53 (3.6%)
Perceived importance of sports safety		
	Not at all important	1 (0.1%)
	Slightly important	4 (0.3%)
	Somewhat important	204 (14.0%)
	Very important	742 (51.0%)
	Extremely important	503 (34.6%)
Completion of injury prevention training		
	Yes	180 (12.4%)
	No	1274 (87.6%)
Purchase of insurance with injury coverage		
	Yes	286 (19.7%)
	No	1168 (80.3%)

TABLE 3. Differences in sports participation based on the severity of an injury experienced among Korean men.

Variable	Severity of the injury experienced (n = 1454)				*F*	*p*
	Severe (n = 91)	Moderate (n = 404)	Mild (n = 545)	No injury experienced (n = 414)		
Exercise frequency (5-point Likert scale)	3.79 ± 1.37	3.96 ± 1.29	3.90 ± 1.43	3.81 ± 1.49	0.923	0.429
Exercise duration (min/session)	97.14 ± 69.32	90.49 ± 66.29	91.24 ± 72.09	86.52 ± 68.55	0.734	0.532
Use of dedicated sports facilities (2-point Likert scale)	1.30 ± 0.46	1.32 ± 0.47	1.39 ± 0.49	1.42 ± 0.49	3.779	0.010*
Duration of injury treatment (5-point Likert scale)	3.18 ± 1.00	2.07 ± 0.97$^{###}$	1.62 ± 0.81$^{###}$	0.00 ± 0.00$^{###}$	768.367	<0.001***

Data are presented as mean ± standard deviation.
** and *** denote $p < 0.05$ and $p < 0.001$, respectively; tested using one-way analysis of variance.*
$^{###}$denotes $p < 0.001$; tested using Tukey's test (post-hoc test) by comparing with the severe injury group.

TABLE 4. Differences in sports safety awareness based on the severity of the injury experienced among Korean men.

Variable	Severity of the injury experienced (n = 1454)				*F*	*p*
	Severe (n = 91)	Moderate (n = 404)	Mild (n = 545)	No injury experiences (n = 414)		
Awareness of sports safety rules (5-point Likert scale)	3.54 ± 0.91	3.24 ± 0.76$^{##}$	3.23 ± 0.71$^{##}$	3.23 ± 0.81$^{##}$	4.541	0.004**
Perceived importance of sports safety (5-point Likert scale)	4.46 ± 0.67	4.23 ± 0.68$^{#}$	4.20 ± 0.66$^{##}$	4.11 ± 0.70$^{###}$	7.299	<0.001***
Completion of injury prevention training (2-point Likert scale)	1.82 ± 0.38	1.81 ± 0.39	1.90 ± 0.30	1.92 ± 0.27$^{#}$	10.104	<0.001***
Purchase of insurance with injury coverage	1.77 ± 0.42	1.72 ± 0.45	1.82 ± 0.38	1.87 ± 0.34	11.117	<0.001***

Data are presented as mean ± standard deviation.
*** and *** denote $p < 0.01$ and $p < 0.001$, respectively; tested using one-way analysis of variance.*
$^{#}$, $^{##}$ and $^{###}$ denote $p < 0.05$, $p < 0.01$ and $p < 0.001$, respectively; tested using Tukey's test (post-hoc test) by comparing with the severe injury group.

pation in sports. Many developed countries are emphasizing sports injury prevention and are conducting policy research to prevent sports injuries [31–33]. Attention should also be given to providing opportunities for education about sports injury prevention. For this, the findings from research on sports injury prevention in developed countries can be referenced and disseminated to other countries. Guidance and information dissemination helps underdeveloped countries become interested not only in sports participation but also in sports safety and sports injury prevention.

This study had several limitations. First, this study examined differences in the sports participation and sports safety awareness of Korean men depending on the severity of the injury they experienced. However, there is a dearth of comparative studies on this topic among countries in Asia, Europe, America and South America. Future studies should compare countries on this topic. Second, this survey was conducted in 2019, so predictive models were used with data collected 5 years ago. The Sports Safety Accident Survey in the Republic of Korea is conducted every 5 years, the next survey will be conducted between September 2024 and December 2024. This data will be available to all researchers in late 2025, so the 2019 Sports Safety Accident Survey is the most recent data in the Republic of Korea. Although this survey was conducted in 2019, it has the advantage of providing basic data that can identify the status and causes of sports safety injuries and suggest related policy directions. Despite the passage of time, research using the raw data from the 2019 Sports Safety Accident Survey is actively underway [6, 16]. Third, participation in sports and awareness of sports safety can vary between countries based on their economic situation. Therefore, to engage safely in sports, more research must be conducted on sports safety. In addition, having a good awareness of sports safety from adolescence can encourage sports participation in adulthood. Moreover, a study by Cho *et al*. [10] revealed that school sports clubs were actively engaging Korean adolescent in sports, and this could

have a positive effect for psychosocial and behavioral health. Therefore, a follow-up study should be conducted on the sports participation and sports safety awareness of adolescents. This study holds significance because it studied 1454 men from across South Korea and its findings are representative of the differences in sports participation and sports safety awareness of the men of the Republic of Korea based on the severity of an injury.

5. Conclusions

No differences exist in the exercise frequency or duration of Korean men based on the severity of an injury. However, there are differences in the use of dedicated sports facilities and the duration of injury treatment. There are also differences in the awareness of sports safety rules, perceived importance of sports safety, completion of sports safety training and purchase of insurance with injury coverage. Overall, the results suggest that the presence and severity of injuries affect the awareness of sports safety among men who have experienced injuries. Based on these results, we suggest that education on sports safety awareness and programs on sports injuries and sports safety should be implemented nationwide to increase sports safety awareness, especially among men who have not suffered a sports injury [34].

AVAILABILITY OF DATA AND MATERIALS

The data that support the findings of this study are available from the corresponding author upon reasonable request.

AUTHOR CONTRIBUTIONS

SZZ—conceptualization; methodology; data collection; formal analysis; investigation; project administration; writing—original draft preparation. WYS—methodology; data collection; writing—review and editing; visualization; validation; supervision. EJL—methodology; data collection; writing—review and editing; data collection; formal analysis; investigation. All authors contributed to editorial changes in the manuscript. All authors read and approved the final manuscript.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The 2019 Sports Safety Accident Survey did not collect identifier information such as home addresses, telephone numbers, and social security numbers, ethical approval was not required and was conducted in accordance with the Declaration of Helsinki. All participants were informed about the study procedure and its purpose and voluntarily signed an informed consent form.

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CONFLICT OF INTEREST

The authors declare no conflict of interest. Wi-Young So is serving as one of the Editorial Board members of this journal. We declare that Wi-Young So had no involvement in the peer review of this article and has no access to information regarding its peer review. Full responsibility for the editorial process for this article was delegated to DM.

REFERENCES

[1] Parra-Camacho D, González-Serrano MH, González-García RJ, Calabuig Moreno F. Sporting habits of urban runners: Classification according to their motivation. International Journal of Environmental Research and Public Health. 2019; 16: 4990.

[2] Yoon KJ. Roles of sport pedagogy for the connection between school physical education and sport-for-all. Asian Journal of Physical Education of Sport Science. 2021; 9: 27–38.

[3] Ward P, Cho K. Five trends in physical education teacher education. Journal of Physical Education, Recreation & Dance. 2020; 91: 16–20.

[4] Grima S, Grima A, Thalassinos E, Seychell S, Spiteri JV. Theoretical models for sport participation: literature review. International Journal of Economics and Business Administration. 2017; 5: 94–116.

[5] Kim MS, Jeon SW. Implications for elderly physical education in Japan prepared for aging. The Korean Journal of Sport. 2018; 16: 105–116.

[6] Kwon J, Jang J. Factors influencing injury severity and frequency among Korean sports participants in their 20s and 30s. Healthcare. 2024; 12: 664.

[7] Wiese-Bjornstal DM, Wood KN, Kronzer JR. Sport injuries and psychological sequelae. Handbook of Sport Psychology. 2020; 32: 711–737.

[8] Van Eetvelde H, Mendonça LD, Ley C, Seil R, Tischer T. Machine learning methods in sport injury prediction and prevention: a systematic review. Journal of Experimental Orthopaedics. 2021; 8: 27.

[9] Emery CA, Pasanen K. Current trends in sport injury prevention. Best Practice & Research Clinical Rheumatology. 2019; 33: 3–15.

[10] Cho N, Shin M, Ahn H. Psychosocial characters and their behavioural indexes for evaluation in secondary school physical education classes and sports club activities. International Journal of Environmental Research and Public Health. 2022; 19: 6730.

[11] Prieto-González P, Martínez-Castillo JL, Fernández-Galván LM, Casado A, Soporki S, Sánchez-Infante J. Epidemiology of sports-related injuries and associated risk factors in adolescent athletes: an injury surveillance. International Journal of Environmental Research and Public Health. 2021; 18: 4857.

[12] Mu S, Zhang A. 'Characteristics and risk management of school sports injury accidents in Yunnan Province,' 2021 International Conference on Social Science: Public Administration, Law and International Relations (SSPALIR 2021). Kunming, China and 17–19 September 2021. Atlantis Press: United States. 2021.

[13] Emery CA, Tyreman H. Sport participation, sport injury, risk factors and sport safety practices in Calgary and area junior high schools. Paediatrics & Child Health. 2009; 14: 439–444.

[14] Bekker S, Finch CF. Too much information? A document analysis of sport safety resources from key organisations. BMJ Open. 2016; 6: e010877.

[15] Neal A, Griffin MA. A study of the lagged relationships among safety climate, safety motivation, safety behavior, and accidents at the individual and group levels. Journal of applied psychology. 2006; 91: 946–953.

[16] Jo KH, Lee SM, So WY, Lee EJ. Mediating effect of sports safety awareness between sports activity habits and the intention to complete safety education among Korean adolescents. Healthcare. 2023; 11: 1891.

[17] Seo Y, Youn HS. Comparison of Korean school students' safety accident rates before and after COVID-19. Healthcare. 2023; 11: 2326.

[18] Ross AG, Donaldson A, Poulos RG. Nationwide sports injury prevention

strategies: a scoping review. Scandinavian Journal of Medicine & Science in Sports. 2021; 31: 246–264.
[19] O'Brien J, Finch CF, Pruna R, McCall A. A new model for injury prevention in team sports: the team-sport injury prevention (TIP) cycle. Science and Medicine in Football. 2019; 3: 77–80.
[20] Adams WM, Casa DJ, Drezner JA. Sport safety policy changes: saving lives and protecting athletes. Journal of athletic training. 2016; 51: 358–360.
[21] Kim KT, Lee YC. University recreation sports safety management in U.S.: a qualitative case study. Korean Journal of Security Convergence Management. 2017; 6: 17–29.
[22] An KJ, Jang SW. A study on the necessity of mandatory safety education for ensuring safety in sports activities: focusing on the current law. The Korean Journal of Physical Education. 2023; 62: 261–271.
[23] Junge A, Engebretsen L, Alonso JM, Renstrom PA, Marshall SW, Golightly YM. Sports injury and arthritis. North Carolina Medical Journal. 2007; 68: 430–433.
[24] Ellapen TJ, Narsigan S, Essack FM, Jugroop P, Macrae NA, Milne J, *et al*. Prevalence of basketball related musculoskeletal injuries among university players: Biokinetics practice and sport injuries. African Journal for Physical Health Education, Recreation and Dance. 2012; 18: 308–316.
[25] So WY, Park SE. Factors influencing injury severity in recreational and professional athletes: multinomial logistic regression analyses considering sex, age, exercise level, and sports activity habits. The Korean Journal of Physical Education. 2023; 62: 497–509.
[26] Kim RH, Seo IH. A study on the importance of sports safety education, continuity of participation, and awareness of safety culture: focusing on sports leaders. The Korean Journal of Physical Education. 2023; 62: 529–541.
[27] Myers JL, Well AD, Lorch RF. Research design and statistical analysis. 3rd edn. Routledge, Taylor and Francis Group: London, United Kingdom. 2010.
[28] Lee IJ, Lee SY, Ha SH. Difference in sports safety awareness between recreational and elite soccer players. The Korean Journal of Physical Education. 2021; 60: 45–54.
[29] Poulos R, Donaldson A, Finch C. Towards evidence-informed sports safety policy for New South Wales, Australia: assessing the readiness of the sector. Injury Prevention. 2010; 16: 127–131.
[30] White P, Donaldson A, Finch CF. But can someone like me do it? The importance of appropriate role modelling for safety behaviours in sports injury prevention. British Journal of Sports Medicine. 2016; 50: 569–570.
[31] Biró A, Szilágyi SM, Szilágyi L, Martín-Martín J, Cuesta-Vargas AI. Machine learning on prediction of relative physical activity intensity using medical radar sensor and 3D accelerometer. Sensors. 2023; 23: 3595.
[32] Timpka T, Ekstrand J, Svanström L. From sports injury prevention to safety promotion in sports. Sports Medicine. 2006; 36: 733–745.
[33] Everard C, Wadey R, Howells K, Day M. Construction and communication of evidence-based video narratives in elite sport: knowledge translation of sports injury experiences. Journal of Applied Sport Psychology. 2023; 35: 731–754.
[34] Kvist J, Bengtsson J, Lundqvist C. The experience and influence of fear after anterior cruciate ligament reconstruction: an interview study with young athletes. BMC Sports Science, Medicine and Rehabilitation. 2023; 15: 50.

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