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Evaluation of Smoking Behaviors and Attitudes of Athletes with Visual Impairment in Powerlifting and Their Coaches

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ABSTRACT

This study was designed to descriptively evaluate the smoking behaviors and attitudes toward smoking among blind powerlifting athletes and their coaches. The research employed a cross-sectional and descriptive survey design and was conducted with visually impaired athletes actively competing at the national level in Türkiye, as well as the coaches working with these athletes within the framework of International Blind Sports Federation (IBSA)-governed powerlifting. Following the approval of the ethics committee, a total of 67 participants were included in the study. Data were collected through face-to-face interviews.

As the data collection instrument, a questionnaire was used, aiming to assess sociodemographic characteristics and attitudes and behaviors related to smoking. The collected data were analyzed statistically and were reported using descriptive statistics only (frequency and percentage).

The findings revealed that more than half of the participants were current smokers, while the vast majority believed that smoking negatively affects athletic performance. A substantial proportion of smokers reported initiating smoking prior to starting sports, with smoking duration generally extending over many years and daily consumption levels clustering at moderate to high ranges. In addition, a widespread desire to quit smoking and confidence in the ability to quit were observed; however, participation rates in smoking cessation education and support programs were found to be low.

This study provides descriptive data on smoking prevalence, smoking-related behaviors, and self-reported attitudes toward smoking and performance among blind powerlifting athletes and coaches. No objective performance indicators were measured, and no analytical comparisons between smoking behavior and performance outcomes were conducted.

Keywords: Smoking behavior, visually impaired athletes, blind powerlifting, health-related attitudes, descriptive survey

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Introduction

The participation of individuals with visual impairments in competitive sports contributes to physical fitness and psychosocial well-being. In addition, structured sport environments may be associated with the development of health-related behaviors. In addition, structured sport environments may be associated with health-related attitudes and behaviors, as ecological and systemic perspectives emphasize the role of sport organizations, coaches, and broader social structures in shaping athletes' lifestyle choices (Temel & Tortop, 2024).

Among strength-based sports, blind powerlifting has gained increasing international recognition as a competitive discipline governed by the International Blind Sports Federation (IBSA) and its relevant sports committee (IBSA, 2025). In IBSA-recognized competitions, athletes are classified according to gender, body weight, and age categories, and performance is evaluated based on the combined total of squat, bench press, and deadlift, performed in a standardized order. This competitive structure enables visually impaired athletes to engage in systematic training and high-level competition, while simultaneously underscoring the importance of maintaining optimal health behaviors to support performance continuity and athlete well-being. Blind powerlifting involves regular training routines and adherence to discipline-specific rules within IBSA-governed competitions IBSA, 2025. Within this environment, lifestyle-related health behaviors may become relevant due to the structured and competitive nature of the sport. Tobacco use ranks among the leading preventable causes of mortality and morbidity worldwide (Edwards, 2004; Ezzati et al., 2005). Cigarette smoking has been associated with increased risks of cardiovascular and respiratory diseases and with systemic alterations affecting vascular function, inflammation, and oxygen transport capacity (Ezzati et al., 2005; Gallucci et al., 2020). Smoking during pregnancy has also been reported to exert adverse effects on fetal and neonatal growth and development (Işık & Özbay, 2024). These systemic effects are directly relevant to physical performance, as efficient oxygen delivery, cardiovascular regulation, and muscular function are central determinants of exercise capacity. In athletes, smoking has been reported to be associated with reduced lung function, impaired gas exchange efficiency, altered cardiovascular responses to exercise, and diminished muscular strength (Saiphoklang et al., 2019; Kobayashi et al., 2004; Kok et al., 2012). Evidence further indicates that smoking may negatively affect both aerobic and anaerobic performance and may delay post-exercise recovery processes (Bernaards et al., 2003; Fukuba et al., 1993; Jang et al., 2017). Accordingly, behaviors that may compromise oxygen delivery, cardiovascular efficiency, or recovery capacity are particularly relevant in strength-based disciplines characterized by maximal or near-maximal loading (Storey & Smith, 2012; Haff & Haff, 2019).Although the prevalence of smoking among athletes has generally been reported to be lower than that in the general population, this prevalence may vary according to sport discipline and contextual factors (O'Sullivan et al., 2020; Aslan et al., 2017). In strength-oriented sports such as weightlifting and blind powerlifting, where coordinated cardiorespiratory and muscular functioning is essential for performance sustainability, smoking-related physiological alterations may have implications for both competitive outcomes and long-term athlete well-being (Storey & Smith, 2012; Haff & Haff, 2019; IBSA, 2025; Kılıncarslan and Erdağı, 2025). Despite extensive evidence demonstrating the adverse effects of smoking on cardiovascular, respiratory, and muscular systems (Ezzati et al., 2005; Gallucci et al., 2020), research specifically addressing smoking behaviors and attitudes among athletes with visual impairments remains limited (Aslan et al., 2017; Yıldırım et al., 2011; Gallucci et al., 2020). Moreover, coaches, who play a central role in shaping athletes' health-related norms and behaviors, have rarely been examined alongside athletes in this context.

In Türkiye, empirical evidence regarding smoking behaviors and attitudes among visually impaired powerlifters and their coaches remains scarce. This study aims to examine smoking behaviors and attitudes toward tobacco use among visually impaired powerlifting athletes and their coaches in Türkiye, using a descriptive survey approach. This study is limited to describing smoking prevalence, behavioral characteristics, and self-reported perceptions regarding the effect of smoking on performance. No objective performance measurements or analytical evaluations of performance-related variables were included. By generating population-specific evidence in IBSA-governed strength sports, the study seeks to contribute to the literature on health-related behaviors in disability sport settings and provide a foundation for performance-oriented and health-focused strategies in visually impaired powerlifting.

Methods and Materials

Study Group

This study was designed as a descriptive, cross-sectional survey. The study group consisted of visually impaired powerlifting athletes who were actively engaged in the sport and who participated in national and international competitions, as well as the coaches working with these athletes. Following approval by Karamanoğlu Mehmetbey University Faculty of Medicine Local Scientific Research Ethics Committee (Decision No. 23-2025/19 dated 10.09.2025), 67 participants, including visually impaired powerlifting athletes and their coaches, were enrolled in the study.

The inclusion criteria were defined as: being between 15 and 45 years of age; being a visually impaired powerlifting athlete or coach; for athletes, having trained regularly in the powerlifting discipline for at least two years at a frequency of three days per week and participating in competitive-level blind powerlifting; and for coaches, actively performing coaching duties.

The exclusion criteria were: hearing-impaired weightlifting or powerlifting athletes or coaches, or individuals self-reporting the presence of moderate or severe diseases of the locomotor, cardiovascular, or metabolic systems. Individuals who did not meet these criteria were excluded from the study.

Data Collection

Researchers collected the data using face-to-face interviews. Prior to administering the questionnaire, all participants were verbally informed about the study, and informed consent was obtained on a voluntary basis.

As the data collection instrument, a questionnaire previously applied in weightlifting populations for the assessment of smoking-related behaviors and attitudes was used (Sezer, 2001; Kutlu et al., 2005; Aslan et al., 2017). The questionnaire comprised 41 items and was administered in its original form without modification. The instrument was not developed as a standardized psychometric scale but as a structured survey form used for descriptive evaluation in the referenced studies. In the study conducted by Aslan et al., 2017, the form was applied to young athletes and coaches to describe smoking habits and related behaviors at a frequency and percentage level. The same item structure was retained, and the items were evaluated individually. No total score was calculated, and no internal consistency coefficient was computed, as the instrument was not designed for scale-based measurement. The questionnaire was used to obtain descriptive information on smoking status, smoking history, daily consumption, cessation attempts, and self-reported attitudes. Therefore, the instrument's measurement power is limited to descriptive reporting and does not reflect the psychometric properties of the scale.

The questionnaire comprised 41 items. The first section included a 14-item Personal Information Form to determine participants' sociodemographic characteristics. This section assessed the following variables: age, sex, marital status, educational level, parental education level, place of residence, and living arrangements. The second section consisted of 27 items and employed a Behavioral Level Assessment Form to evaluate smoking-related attitudes and behaviors among visually impaired powerlifting athletes and coaches. This section assessed smoking status, age of smoking initiation, duration of smoking, daily cigarette consumption, attempts to quit smoking, perceived effects of smoking on performance, and attitudes toward smoking cessation methods The questionnaire was administered through face-to-face interviews conducted by the researchers. All interviews were conducted by the same researcher using a structured question format. The questions were read verbatim and recorded without interpretation. No additional explanation or guidance beyond the written items was provided. Data collection was conducted in comparable competitive environments. Although efforts were made to standardize administration, the possibility of interviewer bias and social desirability bias cannot be fully excluded.

Data Analysis

Descriptive statistics were presented as frequencies (n) and percentages (%). No inferential statistical analyses or group comparisons were performed. The primary objective of the study was limited to describing smoking prevalence and behavioral characteristics in the study group. In addition, the relatively small number of coaches and limited subgroup sizes were considered insufficient for meaningful comparative analysis.

Findings

Descriptive Characteristics of the Participants

A total of 67 visually impaired powerlifting athletes and coaches participated in the study. Within the study group, 94% were visually impaired powerlifters and 6% were coaches. The mean age of the study group was determined to be 29.01 ± 10.72 years (n = 67). Accordingly, the mean age of the visually impaired powerlifting athletes within the group was 29.3 ± 10.95 years (n = 63), while the mean age of the coaches was recorded as 24.25 ± 4.2 years (n = 4). Among the participants, 79.1% (n = 53) were male and 20.9% (n = 14) were female (Table 1).

The sociodemographic characteristics of the participants are presented in Table 2. Regarding marital status, 71.6% of participants were single (n = 48), while 28.4% were married (n = 19) (Table 1).

Examination of parental educational levels showed that primary education was the most common level, with 77.6% of fathers (n = 52) and 94.0% of mothers (n = 63) having completed primary education (Table 1). With respect to residential characteristics, 98.5% of the participants reported living in city centers (n = 66), and 92.5% lived with their families (n = 62) (Table 1).

The study group, comprising visually impaired athletes and coaches, included current smokers (53.7%), never smokers (44.8%), and former smokers (1.5%), consistent with Table 1. Among the 63 visually impaired powerlifters, 34 were current smokers (54.0%), 28 were non-smokers (44.4%), and 1 had quit smoking (1.6%). Of the four coaches, two did not smoke (50.0%) and two were current smokers (50.0%). Among the 36 participants identified as current smokers, 30 provided complete responses to the detailed smoking-behavior items, while 6 had incomplete responses in this section. Therefore, analyses of smoking duration, daily cigarette consumption, time to first cigarette after waking, and cessation-related attitudes were conducted using valid responses (n = 30). No imputation was performed

for missing responses. The distribution of smoking duration, daily cigarette consumption, and time to first cigarette after waking among smokers is presented in Table 3. Smoking duration typically extended over several years, and daily cigarette consumption was concentrated in the moderate consumption category.

When attitudes toward smoking before training and competition were evaluated, 95.5% of participants (n = 64) stated that smoking should not be practiced during these periods, whereas 4.5% (n = 3) reported that it could be practiced (Table 2). Examination of participation in conferences on the harms of smoking showed that 25.4% of participants had attended such an event (n = 17), whereas 74.6% had not (n = 50) (Table 2). Regarding the perceived effect of smoking on athletic performance, 95.5% of participants (n = 64) stated that smoking affects performance, whereas 4.5% (n = 3) indicated that it does not (Table 2). These findings reflect participants' self-reported perceptions and do not represent objective performance measurements.

The smoking characteristics of smokers were additionally evaluated based on complete responses from 30 participants. The remaining six smokers did not provide complete data for this section and were excluded from item-based calculations. Detailed distributions of smoking history, daily cigarette consumption, smoking initiation period, and cessation-related attitudes are presented in Table 3.

Evaluation of behavioral indicators among participants who smoked and responded to these items (n = 30) indicated that the majority of participants reported behaviors reflecting continued access to cigarettes and varying levels of cessation intention (Table 3). When participation in any smoking cessation-related training was evaluated, 13.3% (n = 4) reported participating, while 86.7% (n = 26) reported not participating (Table 3).

Table 1. Smoking status and attitudes toward smoking among visually impaired powerlifting athletes and coaches

	Number (n)	Percentage (%)
Smoking status		
- Current smokers	36	53.7
- Never smokers	30	44.8
- Former smokers	1	1.5
If you had a different job, what would your smoking status be?		
- I would smoke more	11	16.4
- I would smoke less	7	10.5
- I would not smoke at all	49	73.1
Is smoking acceptable before training and competition?		
- Yes, it is acceptable	3	4.5
- No, it should not be practiced	64	95.5
Have you attended a conference on the harms of smoking?		
- Yes, I have attended	17	25.4
- No, I have not attended	50	74.6

Does smoking affect performance?		
- Yes, it affects	64	95.5
- No, it does not affect	3	4.5

Table 2. Sociodemographic characteristics of visually impaired powerlifting athletes and coaches

	Number (n)	Percentage (%)
Sex		
- Female	14	20.9
- Male	53	79.1
Educational level		
- Primary education	6	8.9
- High school	28	41.8
- Higher education	33	49.3
Marital status		
- Married	19	28.4
- Single	48	71.6
Father's educational level		
- Primary education	52	77.6
- High school	8	11.9
- Higher education	7	10.5
Mother's educational level		
- Primary education	63	94.0
- High school	3	4.5
- Higher education	1	1.5
Place of residence		
- City center	66	98.5
- Town or village	1	1.5
Living arrangement		
- With family	62	92.5
- With friends or in a dormitory	5	7.5

Table 3. Smoking characteristics and cessation-related attitudes of visually impaired powerlifting athletes and coaches who smoke

	Number (n)	Percentage (%)
Smoking history		
- 0-1 year	1	3.3

- 1-3 years	11	36.7
- 3-7 years	2	6.7
- 7-10 years	3	10.0
- ≥10 years	13	43.3
Daily cigarette consumption		
- 1-10 cigarettes	7	23.3
- 11-20 cigarettes	13	43.3
- 21-30 cigarettes	8	26.7
- ≥31 cigarettes	2	6.7
Period of smoking initiation		
- Before starting sports	23	76.7
- After starting sports	7	23.3
If you run out of cigarettes, would you ask your friends for one?		
- Yes, I would	20	66.7
- No, I would not	10	33.3
Would you like to quit smoking?		
- Yes, I would	19	63.3
- No, I would not	11	36.7
Have you tried to quit smoking?		
- Yes, I have tried	16	53.3
- No, I have not tried	14	46.7
Do you think you can quit smoking?		
- Yes	20	66.7
- No	10	33.3
Have you attended any training related to smoking cessation?		
- Yes, I have attended	4	13.3
- No, I have not attended	26	86.7

Discussion

In this study, the smoking behaviors and attitudes of visually impaired powerlifting athletes and coaches were examined descriptively. The findings provide descriptive information regarding the participants' demographic characteristics, smoking prevalence, attitudes toward smoking, and patterns of tobacco use among individuals who smoke.

The predominance of male participants and the concentration of participants with high school or higher education are consistent with the characteristics of an actively competing sports population, as defined by the study's inclusion criteria. The high proportions of mothers and fathers with primary education constitute a sociodemographic characteristic of the participants. The majority of participants resided in

city centers and lived with their families, Table 2. These variables were reported descriptively; no analysis of their relationship with smoking behavior was conducted in the present study.

Findings related to smoking status indicate that more than half of the participants were current smokers. The vast majority of participants reported that smoking negatively affects athletic performance and should not be practiced before training or competition (Table 2). These findings reflect descriptive comparisons based on self-reported data. No analytical examination of cause-and-effect relationships was conducted in the present study. Similarly, previous studies conducted among athletes have reported that, despite a high level of awareness of the adverse effects of smoking on performance, smoking behavior may persist (O'Sullivan et al., 2020; Aslan et al., 2017).

Comparable patterns have been reported in other sporting disciplines, including football, weightlifting, and powerlifting. For instance, studies conducted among amateur soccer players have demonstrated that smoking prevalence remains substantial despite athletes' awareness of its negative effects on health and performance (Yıldırım et al., 2011). In these populations, smoking has frequently been associated with social environment, peer influence, and pre-sport lifestyle habits, suggesting that athletic participation alone may not be sufficient to eliminate established smoking behaviors.

This pattern has been discussed in the literature in relation to broader sociocultural influences, although such factors were not directly examined in the present study.

Most individuals who smoked reported initiating smoking before beginning participation in organized sports, indicating that, for many participants, smoking was established prior to sports engagement (Table 3). This finding is consistent with studies in the literature indicating that smoking often begins at an early age and that participation in sports does not necessarily function as a preventive factor for smoking behavior (İnal & Yıldız, 2006).

Similar findings have been observed in strength- and power-oriented sports. Research on weightlifting and powerlifting athletes suggests that smoking initiation often precedes structured athletic training and may persist throughout the athletic career if not specifically addressed through targeted interventions (Yıldırım et al., 2011; O'Sullivan et al., 2020).

A substantial proportion of smokers reported a long-term smoking history and moderate-to-high daily consumption. Taken together, these descriptive findings suggest that smoking may represent a long-standing habit for a considerable portion of the participants, without implying a causal relationship.

The finding that approximately two-thirds of the participants who smoked reported a desire to quit smoking and a similar proportion believed that they could quit indicates an intention to cease smoking among a substantial segment of the study group (Table 3). The existence of a desire to quit is consistent with the literature indicating that motivation represents an important component of the smoking cessation process (West, 2017).

Studies conducted in athletic populations, including football and endurance sports, have similarly reported high motivation to quit smoking despite relatively low participation in structured cessation programs, highlighting a gap between intention and access to professional support (Yıldırım et al., 2011; Saiphoklang et al., 2019).

In contrast, the low rate of participation in smoking cessation-related training warrants attention. This observation suggests that, despite the expressed intention to quit, access to structured support programs may be limited or referral to such programs may not occur at a sufficient level. In addition, a substantial proportion of participants reported asking friends for cigarettes when they ran out, which may point to the role of social interactions in the persistence of smoking behavior; however, this relationship was not directly examined in the present study and should therefore be interpreted cautiously.

More than half of the participants were current smokers. A large proportion of participants reported that smoking affects performance. These evaluations are based solely on descriptive and perception-based data. No objective assessments of performance, cardiorespiratory parameters, or training-related indicators were conducted in this study.

Within the framework of IBSA, blind powerlifting is regulated through standardized technical rules and competition structures that require athletes to perform maximal lifts under strict judging criteria. These regulations emphasize not only maximal strength output but also technical precision, neuromuscular control, and recovery capacity across repeated competition attempts (IBSA, 2025). Therefore, lifestyle-related health behaviors that may compromise physiological efficiency, such as smoking, are of particular relevance in IBSA-governed powerlifting contexts.

Powerlifting is a strength-based sport characterized by maximal or near-maximal loads performed in the squat, bench press, and deadlift and requires high levels of neuromuscular coordination, musculoskeletal integrity, and cardiovascular support. Previous research in blind and visually impaired powerlifters has emphasized that performance outcomes and long-term participation are closely linked to training load management, recovery capacity, and overall physical resilience (Ebada & Eissa, 2020; Haykowsky & Warburton, 1999). In this context, lifestyle-related health behaviors, such as smoking, may impose an additional burden on physiological systems already exposed to high mechanical and metabolic stress during powerlifting training and competition.

In strength sports such as powerlifting and weightlifting, optimal neuromuscular coordination, maximal force production, and efficient cardiovascular responses are essential for performance. Previous research has demonstrated that smoking negatively affects oxygen transport, cardiovascular efficiency, and muscular recovery, which may compromise performance in high-intensity resistance sports (Borrelli et al., 2025; Haykowsky & Warburton, 1999).

Considering that the adverse effects of smoking on cardiorespiratory and muscular functions have been extensively described in the literature Saiphoklang et al., 2019; Borrelli et al., 2025, and that cardiorespiratory and hemodynamic responses are recognized as relevant components of performance evaluation in weightlifting populations Özbay et al., 2025, the continuation of smoking behavior despite awareness of these negative effects represents a descriptive finding of this study. However, the present research did not examine direct relationships between smoking behavior and objective performance or physiological parameters.

Furthermore, evidence from studies on visually impaired powerlifters indicates that training adaptations, injury risk, and recovery capacity are critical determinants of long-term performance sustainability (Haykowsky & Warburton, 1999). However, the present study did not examine the impact of smoking on performance outcomes or physiological parameters. Any interpretation of performance effects is beyond the scope of the data.

In powerlifting, repeated exposure to high-intensity loading, short recovery intervals between attempts, and cumulative training stress are central characteristics of competitive performance. The present study did not include analytical comparisons or objective physiological measurements related to oxygen delivery or recovery processes (Ebada & Eissa, 2020; Haykowsky & Warburton, 1999).

Experimental and observational studies in powerlifting populations have demonstrated that successful performance and injury prevention depend on efficient oxygen delivery, cardiovascular responses, and muscular recovery processes (Haykowsky & Warburton, 1999; Ebada & Eissa, 2020). Given that cigarette smoking has been shown to impair oxygen transport and delay recovery processes, its presence among powerlifters may be particularly relevant in a sport where maximal strength output and repeated high-intensity efforts are required. This study provides a descriptive account of the coexistence of smoking behavior and participation in powerlifting. No causal interpretation was made.

These findings reflect descriptive comparisons and self-reported perceptions only. No analytical tests were performed to examine the underlying mechanisms.

The evaluations presented in this section are limited to the descriptive data obtained from the study. No causal inferences were made, and the findings were interpreted by direct comparison with existing literature, with explicit acknowledgment of the descriptive nature of the data.

Conclusion

In this study, the smoking behaviors and attitudes toward smoking of visually impaired powerlifting athletes and coaches were evaluated descriptively. The findings indicated that smoking prevalence among participants was relatively high according to self-reported data. In addition, a high proportion of participants reported that smoking negatively affected athletic performance. These results are based on participants' perceptions and do not reflect objective performance assessments. The majority of participants stated that smoking negatively affects athletic performance and that it should not be practiced before training and competition.

Among individuals who smoked, self-reported data showed that smoking initiation generally preceded engagement in sports, and that a substantial proportion of smokers had smoking durations extending over many years. The concentration of daily cigarette consumption at moderate and high levels is consistent with a persistent behavioral pattern in this group. Nevertheless, the fact that a considerable proportion of participants who smoked reported a desire to quit and believed they could suggests an intention to quit smoking.

In contrast, participation rates in structured smoking cessation education and support programs were low. This finding indicates that despite high levels of knowledge and awareness, access to professional support mechanisms during the smoking cessation process or referral to such mechanisms may have been limited, based on participants' self-reports. In the present study, smoking prevalence among coaches was reported descriptively. However, no data were collected to examine whether coaches influenced athletes' smoking behavior. Therefore, any interpretation regarding role model effects would be speculative and beyond the scope of the present findings.

Within the context of IBSA-governed powerlifting, where maximal strength output, technical precision, and recovery capacity are critical for competitive performance, smoking may be considered a relevant health-related behavior. However, this study did not measure objective performance outcomes or examine statistical relationships between smoking and performance indicators.

This study indicates that smoking is commonly reported among visually impaired powerlifting athletes and coaches. The findings are limited to the descriptive presentation of smoking prevalence, behavioral characteristics, and self-reported attitudes. These data may serve as a reference point for planning targeted smoking cessation and health promotion strategies within this population. No causal interpretation or performance-based evaluation was conducted. These descriptive data may serve as an initial reference point when planning targeted health promotion and smoking cessation support programs for visually impaired powerlifting athletes and coaches. Future studies using analytical designs and objective performance indicators may provide further insight into the relationships between smoking behavior and sport-related outcomes. In this respect, the study provides descriptive data relevant to protecting health and sustaining athletic performance among visually impaired athletes.

Limitations and Recommendation

This study has several limitations, and the findings should be interpreted accordingly. The measurement tool used in this study was a questionnaire previously applied in weightlifting populations, Sezer, 2001; Aslan et al., 2017, and was not developed as a standardized psychometric scale. Therefore, internal consistency analyses and scale validation procedures were not performed. The items were evaluated individually and descriptively. In addition, items reflecting behavioral indicators, such as the time to

first cigarette after waking, were interpreted descriptively and not linked to a standardized dependence scoring system.". First, the research employed a descriptive, cross-sectional design, with data collected at a single time point. Therefore, relationships between smoking behaviors and attitudes could not be evaluated over time, and no causal inferences were made.

The data used in the study were based on participants' self-reports. Information on smoking behavior, cessation attempts, and related attitudes was obtained from individual self-reports, and the potential influence of factors such as social desirability bias or recall bias cannot be entirely excluded. In particular, evaluations concerning the effects of smoking on performance were limited to participants' perceptual assessments rather than objective or instrument-based physiological measurements.

The study sample was limited to visually impaired powerlifting athletes and coaches actively competing in Türkiye. This limitation constrains the generalizability of the findings to other disability groups, sport disciplines, or individuals engaged in recreational sports. In addition, the relatively small sample size and inclusion of fewer participants than initially targeted should be acknowledged as factors that may reduce the representativeness of the results.

Only descriptive statistics were used in this study, and no inferential analyses examining relationships between variables were conducted. The study objective was limited to a descriptive evaluation of smoking prevalence and behavioral characteristics. In addition, subgroup sizes, particularly the number of coaches, were limited, which restricted the feasibility of meaningful comparative statistical analysis. Furthermore, item-level non-response occurred in the detailed smoking behavior section. Although 36 participants were identified as current smokers, only 30 completed all items in this section. Analyses were therefore conducted on valid responses; no statistical imputation method was applied. Consequently, associations between smoking behaviors and demographic, social, or sport-related variables could not be examined in detail. Similarly, the potential effects of smoking on athletic performance or health indicators were not directly or objectively measured.

In addition, the study did not include powerlifting-specific physiological or performance-based measurements (e.g., strength output, recovery markers, orcardiovascular responses during training or competition), which limits the ability to interpret the potential impact of smoking within the specific demands of IBSA-governed powerlifting.

Finally, although participation rates in smoking cessatione education and support programs were found to be low, qualitative data exploring the underlying reasons for this finding were not collected within the scope of this study. This area represents a clearly defined research need for future, more comprehensive, multi-method investigations. Future studies conducted within IBSA contexts may benefit from combining quantitative performance assessments with qualitative approaches to better understand smoking behaviors, attitudes, and barriers to cessation among visually impaired powerlifting athletes and their coaches.

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Data Availability Declaration

Data Availability Upon Formal Request: While the primary datasets utilized in this study are not publicly accessible due to certain constraints, they are available to researchers upon a formal request. The authors have emphasized maintaining the integrity of the data and its analytical rigor. To access the datasets or seek further clarifications, kindly reach out to the corresponding author. Our aim is to foster collaborative academic efforts while upholding the highest standards of research integrity.

Author Contributions

All authors, [Fatma Sare KARACA], [Erkan ÖZBAY], [Kenan ERDAĞI], [Koulla PARPA] and [Bülent IŞIK], contributed equally to this work. They collaboratively handled the conceptualization, methodology design, data acquisition, and analysis. Each author played a significant role in drafting and revising the manuscript, ensuring its intellectual depth and coherence. All authors have thoroughly reviewed, provided critical feedback, and approved the final version of the manuscript. They jointly take responsibility for the accuracy and integrity of the research.

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University Faculty of Medicine Local Scientific Research Ethics Committee (Decision No. 23-2025/19 dated 10.09.2025). All participants were informed about the purpose of the study and provided voluntary informed consent prior to participation.

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