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ORIGINAL ARTICLE

THE IMPORTANCE OF THE MENSTRUAL CYCLE IN WOMEN'S SPORTS – FOOTBALL PLAYERS' OPINION

ZNACZENIE CYKLU MENSTRUACYJNEGO W SPORCIE KOBIET – W OPINII ZAWODNICZEK PIŁKI NOŻNEJ

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ABSTRACT

Introduction

Previous research has shown that the menstrual cycle (MC) can impact various aspects of athletes' physical and psychophysiologically performance. Menstruation is often considered a taboo subject. Effective communication between coaches and athletes regarding the MC is important for modifying training and recovery programs and providing necessary support.

Aim

This study aims to characterize female football players' general well-being and symptoms during different phases of the MC. Additionally, the study aims to examine the occurrence of MC-related problems, their perceived impact on performance and participation in training and matches, and the players' perception of their trainers' awareness of the MC.

Material and methods

Female football players from Polish clubs were invited to participate in this study. Each player completed an anonymous online questionnaire.

Results

172 out of 195 players reported experiencing problems related to menstruation. 27% of respondents felt good before menstruation, 41% felt bad during menstruation, and 43% felt good after menstruation. It was noted that a higher level of malaise and occurrence of MC-related problems were associated with less frequent participation in training. Only 8% of respondents reported that their coaches were aware of what phase of the MC they were in. Additionally, 32% of players stated that their coaches had knowledge about the phases of the MC.

Conclusion

There is a need to monitor athletes' menstrual cycles in order to adapt training programs to their individual needs. Furthermore, education about the MC should be provided to both coaching staff and players to increase awareness and understanding.

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STRESZCZENIE

Wstęp

Dotychczasowe badania wykazały, że cykl menstruacyjny (MC) może wpływać na różne aspekty sprawności fizycznej i psychofizjologicznej zawodniczek. Menstruacja jest często uważana za temat tabu. Efektywna komunikacja między trenerami i zawodnikami dotycząca MC jest ważna dla modyfikacji programów treningowych i regeneracyjnych oraz zapewnienia niezbędnego wsparcia.

Cel

Celem tego badania jest scharakteryzowanie ogólnego samopoczucia i objawów występujących u zawodniczek piłki nożnej w różnych fazach MC. Ponadto badanie ma na celu zbadanie występowania problemów związanych z MC, ich postrzeganego wpływu na wydajność i udział w treningach i meczach oraz postrzegania przez zawodniczki świadomości trenerów na temat MC.

Materiał i metody

Zawodniczki piłki nożnej z polskich klubów zostały zaproszone do udziału w badaniu. Każda zawodniczka wypełniła anonimowy kwestionariusz internetowy.

Wyniki

172 ze 195 zawodniczek zgłosiło, że doświadczają problemów związanych z miesiączką. 27% respondentek czuło się dobrze przed miesiączką, 41% czuło się źle podczas miesiączki, a 43% czuło się dobrze po miesiączce. Zauważono, że wyższy poziom złego samopoczucia i występowanie problemów związanych z MC były związane z rzadszym uczestnictwem w treningach. Tylko 8% badanych stwierdziło, że ich trenerzy byli świadomi, w jakiej fazie MC się znajdują. Ponadto 32% zawodniczek stwierdziło, że ich trenerzy posiadają wiedzę na temat faz MC.

Wnioski

Istnieje potrzeba monitorowana cykli menstruacyjnych zawodniczek, aby dostosować programy treningowe do ich indywidualnych potrzeb. Co więcej, edukacja na temat MC powinna być prowadzona zarówno wśród kadry trenerskiej, jak i zawodniczek, aby zwiększyć świadomość i zrozumienie problemu.

Słowa kluczowe: cykl menstruacyjny, kobieca piłka nożna, wyniki, objawy menstruacyjne

Introduction

In recent years, women's football (soccer) has experienced significant professional growth, leading to increased intensity, competitiveness, and training/match volumes for elite players (Datson *et al.,* 2014). These factors contribute to higher training loads, which can be categorized into external (physical) and internal (psychophysiological) loads. External load measures the work completed by athletes during training or matches, while internal load refers to the psychophysiological reactions assessed through objective and subjective instruments (Halson, 2014; Teixeira *et al.,* 2021). Menstruation and the associated pain and malaise can impact the internal load experienced by female athletes. Previous research has primarily focused on physiological and quantitative parameters affected by

menstruation. Studies have shown reductions in muscle strength, aerobic performance, endurance, and increased risk of muscle and tendon injuries during different phases of the menstrual cycle (Ekenros *et al.,* 2022; Julian *et al.,* 2017; McNulty *et al.,* 2020; Martin *et al.,* 2021). However, studies on volleyball players have not found a significant impact of the menstrual cycle on flexibility, muscular strength, endurance, anaerobic power, and speed performances (Güler, 2020). Limited research has explored athletes' subjective experiences during different phases of the menstrual cycle. For example, Australian football players reported decreased sleep quality and increased fatigue during the luteal phase of the menstrual cycle (Mikaeli A. Carmichael *et al.,* 2021). Decreased self-confidence has also been observed in some studies (Pinel *et al.,* 2022). Despite the prevalence of the menstrual cycle among women worldwide, it remains a taboo subject and is rarely discussed openly. Athletes often feel reluctant to confide in their coaches about their menstrual problems due to embarrassment, gender differences, and the belief that male trainers may not understand their experiences (Brown *et al.,* 2020; Findlay *et al.,* 2020). The lack of communication between trainers and players regarding the menstrual cycle can significantly impact an athlete's performance (Brown *et al.,* 2020). Since every woman experiences the menstrual cycle differently and faces different problems at different stages, an individualized approach and monitoring of each player's menstrual cycle are crucial for modifying training and recovery programs and providing adequate support (Knowles *et al.,* 2019). The aims of this study were to: 1) characterize the distribution of players' general well-being throughout the menstrual cycle and identify the symptoms female football players experience during menstruation, 2) investigate the correlation between the occurrence of menstrual problems and malaise and the athletes' participation in training and matches, 3) examine the perceived impact of menstruation on performance and its relationship with participation in training and matches, and 4) determine the players' perception of their trainers' awareness of the menstrual cycle.

Material and methods

Study design

The current study utilized an observational cross-sectional design to collect data through an online questionnaire. The questionnaire was developed based on previously published data and aimed to gather information about the experiences of female football players regarding the menstrual cycle and its impact on their performance and well-being.

Recruitment

Female football teams registered with the Polish Football Association (PZPN) and playing in the extra, first, and second league levels were contacted via official email invitations to participate in the study. In cases where no response was received, additional attempts were made to contact the teams through the Facebook platform and phone calls. The teams were provided with information about the aim and design of the study. Once a positive reply was received, an online questionnaire was sent to the team and distributed among the players. The inclusion criteria for participants were being a permanent squad team member and playing in one of the specified leagues. The exclusion criterion was not declaring menstruation.

Questionnaire

An anonymous online questionnaire was completed by each player, consisting of 42 questions. However, for this study, only 18 questions were analyzed. The survey was divided into ten sections, covering general information about the players (age, league, training frequency, and duration), experience in the national team, presence of menstruation, contraception, general questions about menstruation (age of onset, regularity, duration, volume, knowledge about phases, and control), general sensations and symptoms,

the impact of menstruation on physical activity, and players' opinions. The questionnaire was developed based on previous studies (Ergin, E., Kartal, 2020; Ozbar *et al.*, 2016), with additional questions added by the authors.

Statistical analysis

Statistical analysis was performed using the Statistica 13.3 program. The R-Spearman correlation was used to examine the relationship between malaise/problems and participation in training/matches. The Kruskal-Wallis test was applied to compare differences between the five groups of players based on their declared perceived impact of menstruation on performance ("positive," "sometimes positive," "no difference," "sometimes negative," and "negative") in terms of participation in training/matches. The Chi-squared test was used to compare differences between proportions regarding the types of general well-being and players' opinions about their trainers' awareness of the menstrual cycle. The Confidence Interval (CI) index was calculated using the PEDro website's "Confidence interval calculator – PEDro." The statistical significance level was set at alpha 0.05 for all procedures.

Results

A total of 47 female football teams playing in the Polish extra-, first, and second leagues were invited to participate in the study. After contacting the teams via email, nine teams agreed to participate, while one declined. Through the Facebook platform, seven teams agreed to participate, and four refused. Following phone contact, one more team joined the study. The remaining 25 teams did not respond to the invitation. In total, 17 teams expressed their willingness to participate.

One hundred ninety-eight female football players agreed to participate in the study and completed the questionnaire. Three players were excluded from further analysis as they reported no menstruation. The average age of the participants was 20 years (± 4 years). The study group consisted of 60 (30.77%) players from the extra-league, 30 (15.38%) from the first league, and 105 (53.85%) from the second league. Most players (41.5%) reported training 5–6 days per week. Regarding menstruation, 86 players (44.1%) reported regular cycles, 81 (41.5%) reported sometimes irregular cycles, and 28 (14.4%) reported irregular cycles. The most common length of menstruation was 3–6 days (82.6%), and the majority reported medium heaviness (74.9%). Hormonal contraceptives were used by 18 respondents (9.2%).

Of the participants, 172 reported experiencing problems and malaise related to menstruation, with 93 stating that these problems occurred only occasionally. When an individual reported a symptom as „always", „sometimes" or „rarely" it was analyzed as „yes", but if the respondent declared „never" it was analyzed as „no". The most frequently reported symptoms were abdominal pain or cramps (94.77%), sensitivity (88.37%), anger (87.79%), fatigue (87.21%), and increased appetite/cravings (83.14%). Some participants also mentioned heavy/achy legs, overload sensation, lack of energy, and uterine pain (Figure 1).

Participants were asked to describe their general well-being during different phases of menstruation. There were significant differences in general well-being types during the pre-menstrual, menstrual, and post-menstrual periods (Table 1).

The impact of menstruation on physical capacity was assessed. Twenty-three players reported a negative impact, 78 reported a sometimes-negative impact, 38 reported no difference, 27 reported a sometimes-positive impact, and 6 reported a positive impact.

The relationship between problems and malaise related to menstruation and the perceived impact of menstruation on physical capacity and participation in training and matches was analyzed. A negative correlation was found between the level of malaise and the occurrence of problems related to menstruation and participation in training, confirming the observation: the higher level of malaise and occurrence of problems related

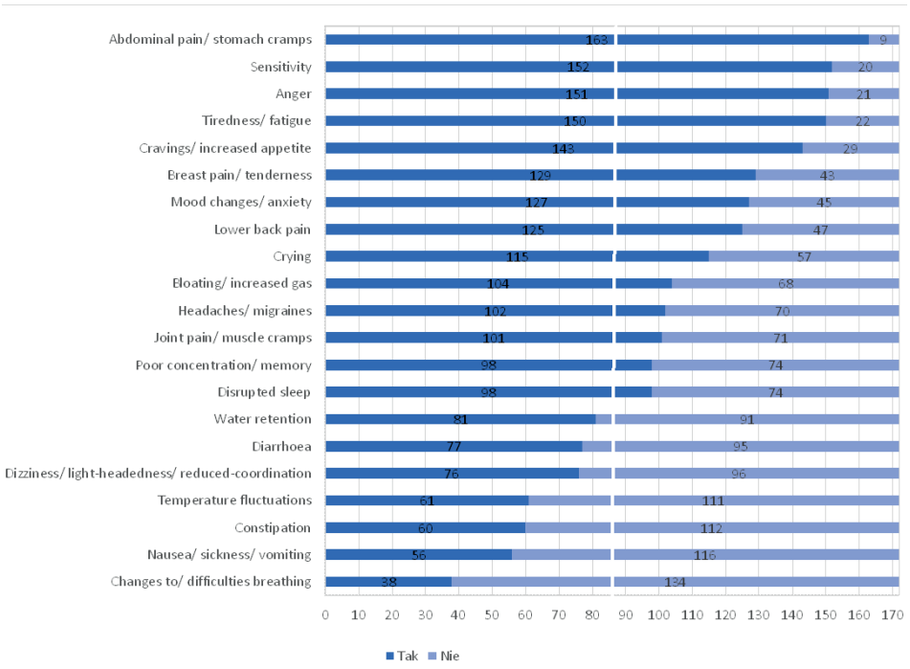

Figure 1. Symptoms related to the MC
N = 172

to menstruation, the less frequent participation in training (R-Spearman = −0.175; $p < 0.05$). However, there was no correlation between these factors and participation in matches (R-Spearman = −0.105; $p > 0.05$). The analysis did not reveal any significant differences among players who reported different perceived impacts of menstruation ("positive," "sometimes positive," "no difference," "sometimes negative," and "negative") on their performance and participation in both training (Kruskal-Wallis: $p = 0.4487$) and matches (Kruskal-Wallis: $p = 0.2270$).

Participants were asked their opinion regarding their trainers' menstrual cycle awareness. A statistically significant difference was observed when comparing the proportions (Table 2).

Discussion

In our study, we found that out of the 195 female football players examined, 172 (88.2%) reported experiencing problems and malaise associated with their menstrual cycle (MC). The most frequently reported symptoms were abdominal pain or cramps (94.8%), sensitivity (88.4%), anger (87.8%), fatigue (87.2%), and increased appetite/cravings (83.1%). These findings are consistent with previous research that reported a high prevalence of MC-related negative symptoms among athletes. For example, Findlay *et al.* (2020) found that 93% of surveyed players reported MC problems, while Brown *et al.* (2020) identified all of their subjects as having MC problems. These studies consistently reported abdominal pain or cramps as the most common symptom. However, other studies have highlighted different primary symptoms, such as irritability (54%) in the research by Ekenros *et al.* (2022) and mood changes/anxiety (90.6%) in the studies by Bruinvels *et al.* (2020). Additional commonly reported symptoms included bloating, cravings/increased appetite, breast pain/tenderness, tiredness/fatigue, reduced energy levels, flooding, general discomfort, worry, and distraction. These findings highlight the significant impact of MC-related symptoms on female athletes, affecting their well-being and potentially influencing their performance and participation in sports activities. It underscores the importance of

Table 1. How general well-being is distributed in the period before, during and after menstruation.

How do you fell overall?	Before menstruation				During menstruation				After menstruation			
	Number of respondent	**Proportion (95%CI*)**	**Comparison of proportion**	**P value ****	**Number of respondents**	**Proportion (95%CI*)**	**Comparison of proportion**	**P value ****	**Number of respondents**	**Proportion (95%CI*)**	**Comparison of proportion**	**P value ****
Very good	24	14% (10–20%)	Very good vs. Good	**P = 0.0 029**	5	3% (1–7%)	Very good vs. Good	**P < 0.0001**	69	40% (33–48%)	Very good vs. Good	P = 0.5729
			Very good vs. No difference	P = 0.1391			Very good vs. No difference	**P = 0.0001**			Very good vs. No difference	**P < 0.0001**
Good	47	27% (21–34%)	Very good vs. Bad	**P = 0.0001**	42	24% (19–31%)	Very good vs. Bad	**P < 0.0001**	74	43% (36–51%)	Very good vs. Bad	**P < 0.0001**
			Very good vs. Really bad	**P = 0.0045**			Very good vs. Really bad	**P < 0.0001**			Very good vs. Really bad	**P < 0.0001**
No difference	34	20% (15–26%)	Good vs. No difference	P = 0.1263	26	15% (11–21%)	Good vs. No difference	**P = 0.0354**	24	14% (10–20%)	Good vs. No difference	**P < 0.0001**
			Good vs. Bad	P = 0.1592			Good vs. Bad	**P = 0.0008**			Good vs. Bad	**P < 0.0001**
Bad	59	34% (27–42%)	Good vs. Really bad	**P < 0.0001**	71	41% (34–49%)	Good vs. Really bad	P = 0.0640	5	3% (1–7%)	Good vs. Really bad	**P < 0.0001**
			No difference vs. Bad	**P = 0.0035**			No difference vs. Bad	**P < 0.0001**			No difference vs. Bad	**P = 0.0003**
Really bad	8	5% (2–9%)	No difference vs. Really bad	**P < 0.0001**	28	16% (12–23%)	No difference vs. Really bad	P = 0.7980	0	0% (0–2%)	No difference vs. Really bad	**P < 0.0001**
			Bad vs. Really bad	**P < 0.0001**			Bad vs. Really bad	**P < 0.0001**			Bad vs. Really bad	**P = 0.0223**

* CI – Confidence Interval
** p-value was assessed using chi2 test

Table 2. Players' opinion on trainers' consciousness about the menstrual cycle.

Question/ Answer	Is your coach aware of what phase of MC you are in?				Do you think your coach should be aware of the phase of the MC?				Do you think your coach is aware of the phase of the MC?			
	Number of respondents	**Proportion (95%CI*)**	**Comparison of proportion**	**P value ** **	**Number of respondent**	**Proportion (95%CI*)**	**Comparison of proportion**	**P value ** **	**Number of respondents**	**Proportion (95%CI*)**	**Comparison of proportion**	**P value ** **
Yes	16	8% (5–13%)	Yes vs. No	**P < 0.0001**	114	57% (51–65%)	Yes vs. No	**P < 0.0001**	63	32% (26–39%)	Yes vs. No	P = 0.1922
No	143	73% (67–79%)	Yes vs. sometimes yes	**P = 0.0034**	21	11% (7–16%)	Yes vs. I don't know	**P < 0.0001**	51	26% (20–33%)	Yes vs. I don't know	**P = 0.0411**
Sometimes yes/ I don't know	36	18% (14–25%)	No vs. sometimes yes	**P < 0.0001**	60	31% (25–38%)	No vs. I don't know	**P < 0.0001**	81	42% (35–49%)	No vs. I don't know	**P = 0.0009**

* CI – Confidence Interval
** p-value was assessed using chi2 test

addressing these issues and implementing strategies to support athletes during different menstrual cycle phases.

The results of our study indicate that a significant percentage of respondents experienced changes in their well-being during different phases of the menstrual cycle. Specifically, 27% of participants reported feeling good before menstruation, 41% felt bad during menstruation, and 43% felt good after menstruation. These findings align with some previous research studies that have explored the well-being of female athletes throughout the menstrual cycle. For example, Ergin and Kartal (2020) conducted a study with volleyball players and found that 58.5% of participants felt bad before menstruation, 52.3% felt good during menstruation, and 62.3% felt good after menstruation. Another study by Wodarska *et al.* (2013) reported that only 8% of players experienced pain throughout the entire menstrual bleeding period, while 58% experienced pain at the beginning of menstruation. These variations in results highlight the individuality of athletes' experiences during the menstrual cycle. Monitoring the menstrual cycle and associated symptoms is crucial to provide appropriate support and to make necessary modifications to training, nutrition, and recovery programs. Elite sports teams such as Chelsea Football Club, the United States Women's Soccer and Swimming Teams, and The Brisbane Lions Australian Football Club have started using commercial smartphone apps to track athletes' menstrual cycles and implement interventions when needed (Mikaeli Anne Carmichael *et al.*, 2021). The US Women's National Team has also attributed part of its success in winning the World Cup to monitoring the menstrual cycle and providing individualized support (Read *et al.*, 2023). These examples demonstrate the growing recognition of the importance of considering the menstrual cycle in sports performance and the potential benefits of personalized support for athletes. By understanding individual experiences and tailoring interventions accordingly, athletes can optimize their performance and well-being throughout the menstrual cycle.

Previous studies have indeed demonstrated the impact of the menstrual cycle (MC) on perceived sport performance. For instance, Read *et al.* (2023) found that all 15 players (100%) in their study reported that the MC affects their performance. Armour *et al.* (2020) reported that 50% of female athletes believed that certain phases of the MC could impact their performance in training, and 56.5% believed it could affect their competitive performance. However, some respondents also indicated a positive effect of certain phases on training (6.4%) and competition (< 1%). Findlay *et al.* (2020) examined the negative impact of the MC on training and competition and found that over two-thirds of athletes experienced negative effects on both. The results of our study align with many of these previous findings. In our research, 59% of respondents perceived a negative or sometimes negative impact on their physical performance due to the MC, while 19% reported a positive or sometimes positive impact. The variation in results across studies may be partly attributed to the differences in the proportion of participants using hormonal contraceptives (HC) versus non-users. Read *et al.* specifically examined non-HC users, while other studies included different percentages of HC users: approximately 41.9% (Armour *et al.*), 27% (Findlay *et al.*), and 9.2% (our study). HC is often recommended to reduce pain, symptoms related to the MC, and menstrual bleeding (Martin *et al.*, 2017; Wong *et al.*, 2009). These findings highlight the complex relationship between the MC and sports performance, as individual experiences can vary. The use of HC can also influence these perceptions. Understanding these dynamics is crucial in developing personalized approaches to training, competition, and support for female athletes throughout their menstrual cycle.

The impact of MC on the participation of female athletes in training and matches is an important aspect to consider. The physical and

physiological symptoms associated with the MC can sometimes lead to athletes missing training sessions or matches. Bruinvels *et al.* (2020) found that a greater number of symptoms was significantly associated with missing or changing training sessions and missing sporting events or competitions. However, it is worth noting that some athletes may not consider MC issues a sufficient reason to refrain from training, as observed in the study by Findlay *et al.* In their research, rugby players tended to endure training and competition despite perceived MC symptoms. This could be due to internal and external pressures to perform at a high level. Competitive athletes may be more inclined to push through MC symptoms compared to recreational athletes or the general population (Findlay *et al.*, 2020). Martin *et al.* (2017) reported that only 4.1% of their athletes repeatedly changed their training due to MC-related symptoms. It is also known that players are less likely to miss competitions than training sessions because matches provide an opportunity for them to showcase their abilities, and in team sports, they do not want to let their team down. These findings are consistent with the current study, which revealed a correlation between a higher level of malaise and the occurrence of problems related to menstruation and less frequent participation in training. However, no correlation was found between problems and malaise related to menstruation and participation in matches. A similar conclusion was reached by Ekenros *et al.* (2022), who found that MC-related symptoms led athletes to miss training sessions, but only 14% of athletes decided to withdraw from competitions. Overall, the decision to participate or abstain from training and matches during the MC is influenced by various factors such as symptom severity, individual tolerance, performance pressures, and the event's significance. Understanding these factors can help coaches and support staff provide appropriate support and guidance to athletes in managing their MC-related symptoms while maintaining their training and competition commitments.

To ensure optimal results for female players, coaches must be aware of the challenges they may face during the MC. This highlights the importance of a strong coach-athlete relationship and open communication. Coaches should know about the different phases of the MC, the associated symptoms that may affect female athletes, and how the MC can impact their performance. However, in the current study, only 8% of respondents reported that their coaches were aware of their MC phase. Furthermore, while 32% of players stated that their coaches knew the phases of the MC, 57% believed that their coaches should possess this knowledge. Similar findings were observed in a study conducted with swimmers and their coaches by Marais *et al.* In that study, despite 87% of trainers claiming to know when an athlete had their menstruation, 80% of swimmers indicated that their coaches were unaware of their menstrual cycle. Additionally, 72% of athletes reported not discussing any problems related to the MC with their coaches. Interestingly, 97% of coaches acknowledged the impact of the MC on athletes' performance, but only 58% were willing to adapt training programs accordingly. In some cases, coaches admitted to intentionally avoiding attention to menstruating swimmers (Marais *et al.*, 2022). Research by Brown and Knight involving 14 female coaches working with elite athletes also highlighted disparities in knowledge about the impact of the MC on athletes. Coaches who had more training experience demonstrated greater awareness of symptoms and their impact on performance, but personal experience with the MC did not necessarily prepare coaches for addressing these issues (Brown and Knight, 2022). In terms of coaches' self-assessment of knowledge and confidence in discussing the MC with athletes, Clarke *et al.* found that coaches' knowledge about the MC and its impact on sports performance was relatively low, with an average score of 2.3 out of 5. However, there was a high interest in learning more about the topic, with an average score of 4.6 out of 5. Coaches' self-confidence in discussing

the MC with athletes was moderate, with an average score of 3.1 (Clarke *et al.,* 2021). It is important to note that coaches should not only possess knowledge about the MC but also understand how to support athletes. Hyde and Zipp's research indicated that while trainers had good knowledge and awareness of the individuality of each athlete regarding the MC, they had limited understanding of how they could assist. The common response from trainers was to reduce training intensity. Respondents emphasized the insufficient knowledge of coaches and players, attributing it to inadequate education in this area (Hyde M., 2022). Maintaining a strong coach-athlete relationship does not lie solely with the coach; it requires commitment from both parties. Findlay *et al.*'s study revealed that athletes were hesitant to confide in their coaches about MC-related issues due to feelings of embarrassment, awkwardness, the coach's gender, and the belief that the coach would not understand or be able to help. Some players mentioned that they would only inform their coach about MC problems if it directly affected their performance (Findlay *et al.,* 2020).

In summary, coaches need to be knowledgeable about the MC and its impact on athletes' performance. Effective communication, trust, and understanding between coaches and athletes are essential in addressing these issues. Coaches should be proactive in seeking knowledge, creating a supportive environment, and providing appropriate support to female athletes during their MC.

Limitation

The current study has several limitations that may have influenced the obtained results. Firstly, the data collection was conducted through an online questionnaire comprising closed questions. This format restricts participants from providing detailed explanations for their answers, potentially limiting the depth of information gathered. Open-ended questions or qualitative interviews could have provided a more comprehensive understanding of the players' experiences. Secondly, the study relied on self-reported opinions of the players regarding their coaches' awareness of the phases of the MC. However, the actual knowledge possessed by the coaches was not assessed or verified. This introduces a potential discrepancy between the players' perceptions and the coaches' actual understanding, which could impact the accuracy of the findings. Additionally, it is worth noting that the study focused exclusively on elite or senior players. The experiences of these athletes regarding MC symptoms, their impact on performance, and their opinions about coaches' awareness may differ from those of junior players or athletes at different competitive levels. Therefore, the generalizability of the findings to other populations, such as junior players or recreational athletes, may be limited. As an observational study, it focused on observing and describing the existing relationships and characteristics among the variables of interest, rather than manipulating or controlling them. This design allowed for the collection of data from a large number of participants in a relatively efficient and cost-effective manner. However, it is important to note that observational studies have limitations in establishing causal relationships between variables and are more susceptible to biases and confounding factors. To overcome these limitations, future studies could consider using a mixed-methods approach that combines quantitative surveys with qualitative interviews or focus groups, collected prospectively. This would provide a more comprehensive understanding of the players' experiences and allow for a deeper exploration of their perceptions and interactions with coaches. Additionally, including a broader range of participants, such as junior athletes or athletes from different competitive levels, would help capture a more diverse range of experiences and perspectives related to the MC and coaches' awareness.

Conclusion

In conclusion, the findings of the current study demonstrate that a significant number of female football players experience problems

related to the menstrual cycle, which can impact their participation in training and their perceived performance. However, despite these challenges, players often do not communicate their struggles to their coaches. There is a need for increased education and awareness among coaches and players regarding the menstrual cycle, its phases, and its potential effects on athletic performance. This knowledge would facilitate open and comfortable communication, allowing coaches to provide appropriate support and tailor training programs to meet the individual needs of athletes. By normalizing conversations about the menstrual cycle and addressing the unique experiences of each player, the overall well-being and sports performance of female athletes can be improved.

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