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Advancing gender equity in sport: a scoping review of international sport federation policies for pregnant, postpartum and parenting elite athletes

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ABSTRACT

Objective The aim was to synthesise international-level sport policies for pregnant, postpartum or parenting high-performance athletes in order to understand what policies currently exist and to identify policy gaps to be addressed.

Design Scoping review.

Data sources Online databases (MEDLINE, EMBASE, CINAHL, SPORTDiscuss, Evidence-Based Medicine Reviews (Ovid), Scopus, Web of Science and ClinicalTrials.gov) and Google up to 14 June 2024. Additionally, a targeted search of existing policies was conducted via the websites of International Federations (IFs) and continental sporting organisations (CSOs) in September 2023.

Eligibility criteria We included policies from IFs recognised by the International Olympic Committee, and CSOs associated with the IFs that specifically address pregnant, postpartum or parenting athletes. Policies were a written principle of action adopted by the IFs/CSOs that provided any form of support during pregnancy, postpartum or for parents.

Results A total of 219 organisations (49 IFs; 170 CSOs) were identified and contacted, with 47/49 (96%) IFs and 15/170 (9%) CSOs responding. Sport policies related to pregnancy, postpartum or parenting athletes were identified from 20 IFs including (1) guidance on training/competition during and following pregnancy; (2) eligibility affected or training not advised; (3) protection from dismissal; (4) special rank, points or quota protection; (5) protections apply to adoption, surrogacy, miscarriage, stillbirth, egg freezing and/or fertility treatment; (6) duration of leave and if leave is paid and (7) breastfeeding support/space. No policies identified specific provisions for childcare support/space.

Conclusions Less than half of all IFs have developed sport policies to support pregnant, postpartum and parenting athletes. Of the policies that do exist, most are limited in the extent to which they address the broad range of biopsychosocial supports that are necessary for facilitating optimal performance, enhancing long-term athlete health and addressing gender inequities that are deeply entrenched across all levels of sport. This review provides a critical piece of evidence needed to inform future policy development.

INTRODUCTION

The Olympic Movement endeavours to create a better world through sport and support athletes to strive for excellence without discrimination.¹ In 2017, the International Olympic Committee (IOC)

WHAT IS ALREADY KNOWN ON THIS TOPIC

- ⇒ A growing number of female athletes are continuing to pursue elite-level sport during pregnancy, post partum and parenting.
- ⇒ International sport organisations across the globe have begun to develop policies to support these athletes.

WHAT THIS STUDY ADDS

- ⇒ This study synthesises existing sport policy to support pregnant, postpartum or parenting athletes.
- ⇒ ~40% of International Federations (IFs) had one or more policies in place, primarily related to point or rank freezing during the perinatal period.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

- ⇒ Fewer than half of IFs and no continental sporting organisations have policies in place to support pregnant and parenting athletes. Many existing sport policies placed a high burden on clinicians to make decisions about sport participation during or following pregnancy.
- ⇒ Key gaps in potential supports (eg, protection from dismissal, training guidance, lactation and childcare spaces) were identified that should be incorporated in future research and policy development.

launched the Gender Equality Review project that resulted in action-oriented recommendations that are necessary for advancing gender equality in sport. One such recommendation is to ensure equal participation for women athletes at the Olympic Games.² While the proportion of women athletes has grown since their first inclusion in the Paris 1900 Games,³ the Paris 2024 Olympics was the first to achieve this lofty goal with full gender parity. Yet more work remains to be done. More recently, the IOC developed 21 Gender Equality Inclusion Objectives for 2021–2024. Notably, one objective is focused on reducing inequalities by ‘eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard’.⁴

As support for women's sport grows, so has the number of athletes continuing elite-level sport participation during and following pregnancy, and this trajectory is projected to continue. In 2016, the

IOC released guidelines and training considerations for recreational and elite athletes during and following pregnancy, and it is essential that sport organisations incorporate such recommendations into the development of sport policies to support and protect these athletes.⁵ In recent years, a growing number of International Federations (IFs) have developed sport policy to support continued participation by pregnant athletes, as well as those who return to sport following childbirth. Such policy changes reflect the reality that more athletes are extending their careers, often reaching peak performance during their most fertile years. Recent qualitative research has provided critical insights into a broad range of barriers and facilitators that shape elite athletes' experiences during pregnancy and postpartum return to sport,^{6–8} including the clear need for sport policies to support their equitable participation in sport. However, there is a lack of consistent and evidence-based guidelines for return to sport post partum, suggesting there is limited research evidence underpinning such policies.^{9–11} Furthermore, inequities exist between sports with provisions in place compared with those sports where policies are still in development. For those IFs with available maternity and parental policies, critical gaps in scope and/or clarity of the provisions have been identified.

Without evidence-based policies and protections in place to support the health and well-being of athletes, undue burden is being placed on athletes, coaches and healthcare providers to navigate pregnancy and parenting on their own.^{12–14} Previous work has attributed an early and rushed return to sport participation as a risk factor for injury and a major reason for decisions to discontinue elite-level sport during this time.¹⁵ Thus, policies to support pregnant, postpartum and parenting athletes could support long-term athlete health and performance by allowing adequate recovery time and supports to return post partum 'safely' and injury-free.

Elite athletes have a unique opportunity to serve as role models for young girls around the world and to support them in being physically active across their lifespan. As nearly two-thirds of perinatal women have attributed parenthood as the primary reason they ceased sport and physical activity participation,⁸ athlete-mothers represent a novel and potentially potent means to reduce global physical inactivity and promote the growth of sport worldwide, especially among women and girls. Therefore, the aim of this study was to synthesise international-level sport policies for pregnant, postpartum or parenting high-performance athletes in order to understand what policies currently exist and to identify policy gaps to be addressed.

METHODS

This scoping review was conducted in accordance with the Joanna Briggs Institute Manual for Evidence Synthesis,¹⁶ including updated methodological guidance outlined by Peters *et al.*¹⁷ Reporting followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA).¹⁸

Inclusion criteria

We included policies of IFs recognised by the IOC and continental sporting organisations (CSOs) associated with the IFs that specifically address pregnant, postpartum or parenting athletes. The IOC maintains a list of recognised sport federations at the international level (<https://olympics.com/ioc/international-federations>). Pregnancy policies were defined as a written principle of action adopted by the IFs or CSOs that provided any form of support for an athlete choosing to continue competing

or training while pregnant, or those that affected eligibility to compete while pregnant. Maternity and parental leave policies were defined as those that provide (1) leave or protected status for pregnant or parenting athletes, (2) any form of social or financial support while parenting or (3) supports that facilitate a return to sport post partum. No restrictions were placed on the publication date of the policy; however, included policies had to be currently endorsed by IFs or CSOs. Policies written in English and French were included, as these are the two official languages of the IOC. Policies in other languages were not identified.

Policies were sought via published literature and/or official websites of IFs and CSOs. If a policy was not available via published literature or official websites of IFs and CSOs, the organisation was contacted directly—first by email, up to three times and then by phone, up to three times. All identified IFs and CSOs were contacted. Members of the research team also used their professional and personal networks to connect with IFs and CSOs to confirm the existence of policies that could potentially be included in this review.

Search strategy

To identify relevant policies, a four-step search was conducted. First, a comprehensive search of academic literature was created and run by a research librarian in the following databases: MEDLINE, EMBASE, CINAHL, SPORTDiscuss, Evidence-Based Medicine Reviews (Ovid), Scopus, Web of Science, and ClinicalTrials.gov using the general search strategy of (“matern* leave*” or “patern* leave*” or “parent* leave*” or “family leave*”) AND (athlet* or sport* or coach*) AND (athlet* or sport* or coach*). All databases were searched up to 26 October 2023, with an updated search on 14 June 2024. Reference lists of included literature and relevant reviews were hand searched for additional, relevant studies. Search results were uploaded to Covidence (Melbourne, VIC, Australia), an online systematic review management software, where duplicate records were removed. Titles and abstracts of all unique articles were independently assessed by two reviewers (MHD and T-LM). Full-text articles of titles and abstracts meeting initial screening criteria were retrieved. Two independent reviewers then examined all full-text articles for inclusion, with disagreements resolved through discussion between reviewers and/or a third reviewer if needed.

Second, a Google search using the search terms “pregnancy policy” OR “parental leave policy” OR “maternity policy” AND “sport” was conducted from 15 May 2023 to 30 August 2023, and then updated on 14 June 2024. Any media articles or policies that appeared were scanned to see if they were relevant to the organisations and policies we sought to identify. Third, we conducted a targeted search of existing policies via the websites of IFs and CSOs in September 2023. Federation names and policy types were searched; for example, “World Athletics” AND “parental leave policy” OR “maternity policy” OR “pregnancy policy”. This search was updated on 14 June 2024.

Any policies that were compiled through this search strategy were downloaded and searched for keywords, using the Ctrl+F function on the Windows Operating System. Specific keywords included: Maternity, Pregnancy, Pregnant, Postpartum, Leave, Parental Leave, Miscarriage, Child and Baby. Fourth, when we were unable to find relevant policies through the three search approaches, we contacted the IFs or CSOs by email, and then phone, to obtain either: (a) a copy of the relevant policy or (b) confirmation that no such policies exist within their IF or CSO.

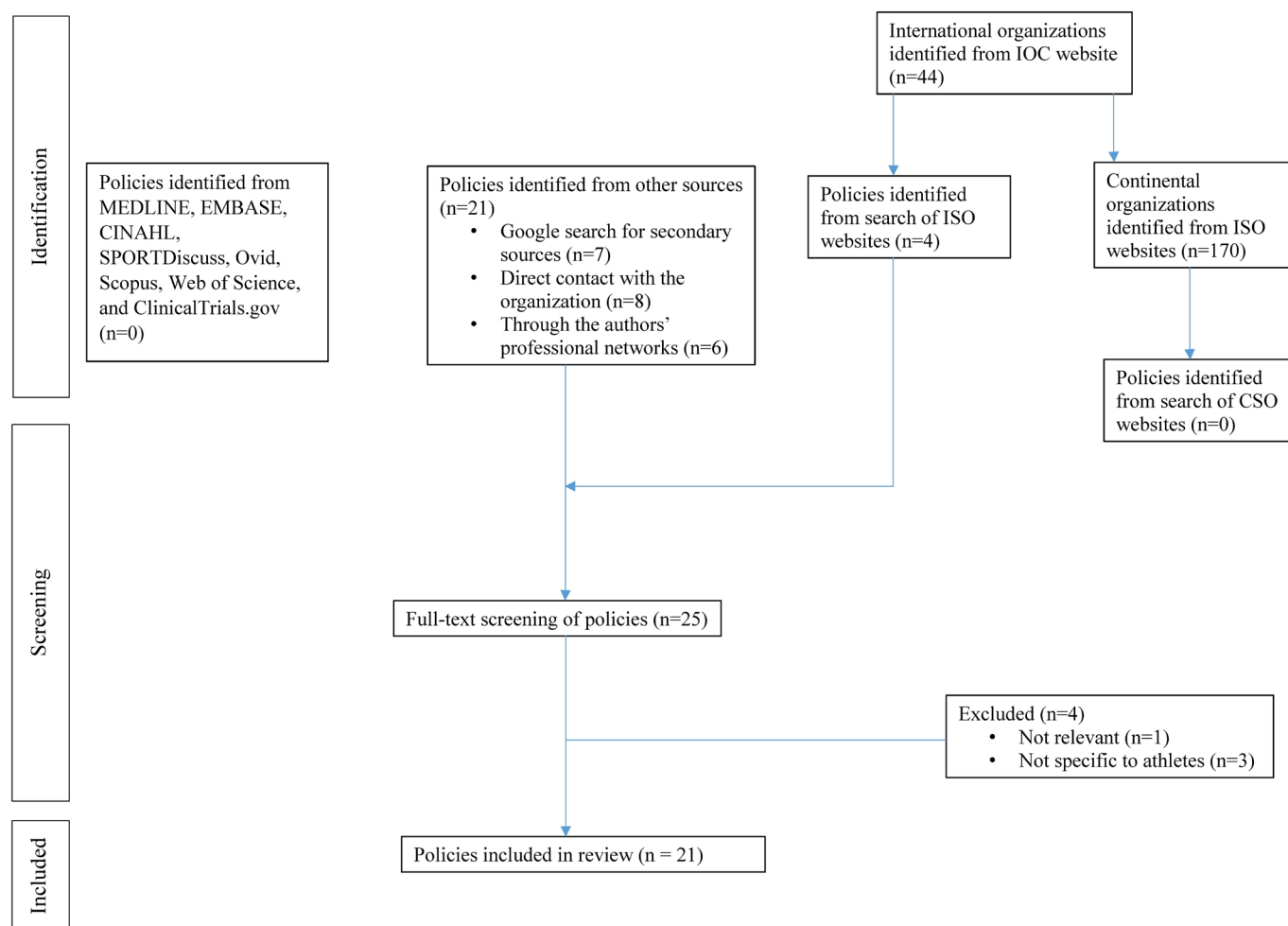


Figure 1 Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews flow chart. IOC, International Olympic Committee; ISO, International Sport Organization.

Policy selection

Policies were retrieved individually by a trained research assistant (GB) and screened by two reviewers (GB and MHD) against the selection criteria. Policies that did not meet the eligibility criteria at the screening stage were excluded, while those that did meet the criteria were recorded in a data extraction form. When there was disagreement among the two reviewers with respect to the inclusion of a specific policy in the final review, a third team member (T-LM) reviewed the policy and discussion ensued until consensus was reached. An overview of the screening process is shown in [figure 1](#).

Data charting

Data were extracted from all policies and recorded in a data charting template designed by the research team. To ensure consistency in reporting, and consistent with best practices for data extraction in scoping reviews,¹⁹ the data charting template was piloted by GB and MHD with five policies. The categories were discussed with coauthors and expanded to include eight policies: (1) guidance on training/competition during and following pregnancy; (2) eligibility affected or training not advised; (3) protection from dismissal; (4) special rank, points or quota protection; (5) protections apply to adoption, surrogacy, miscarriage, stillbirth, egg freezing and/or fertility treatment; (6) duration of leave and if leave is paid; (7) breastfeeding support/space and (8) childcare support/space. The data extraction of

the remaining policies was conducted by GB, and two reviewers (MHD and T-LM) reviewed all extracted data to ensure accuracy. The following categories were included in the data charting template: name of the IFs or CSOs; year of publication; access; development process; stakeholder engagement; training/competition during and following pregnancy; eligibility affected or training not advised; protection from dismissal; special rank (eg, the athlete maintains their rank for a specified duration of time due to pregnancy), points (eg, the athlete maintains their prepregnancy points for a specified duration postpregnancy) or quota protection (including duration of protection); protections apply to adoption, surrogacy, miscarriage, stillbirth, egg freezing and/or fertility treatment; maternity/parental leave of absence duration and remuneration; breastfeeding support/space; childcare support/space. The mode and frequency of contact with the IFs and CSOs, as well as whether a policy was provided, were recorded.

Patient and public involvement

No patients or the public were involved in the development of this scoping review.

Equity, diversity and inclusion statement

The research team consists of researchers and a clinician-researcher across early, mid, and late career researchers. Members

of the research team originate from Canada, China, Australia and Zimbabwe and represent diverse ethnic and cultural identities. All research team members identify as women and include mothers and former athletes. Cowan *et al*²⁰ found that women are 'strikingly under-represented' in author leadership positions in sport and exercise medicine/physiotherapy journals, and our all-woman research team addresses the gender inequity.

This scoping review focused on policies of IFs and CSOs that specifically address pregnant, postpartum or parenting athletes. The IOC has stated that "sport is one of the most powerful platforms for promoting gender equality and empowering women and girls". However, there are necessary policies that must be applied in the sport context to ensure that women and girls are afforded the same opportunities as their male counterparts. Specifically, international-level policies to support pregnant, postpartum or parenting athletes are necessary for achieving gender equity in sport.

RESULTS

The PRISMA flow diagram of the search of the academic literature (step 1) is presented in online supplemental figure 1. The screen identified 366 records, but no policies were identified for full-text retrieval.

The 219 organisations at the IFs (n=49) and CSOs (n=170) level were identified and contacted. At the international level, we received responses from all IFs except two (Fédération Internationale d'Escrime and World Skate; 95.9% response rate). A total of 170 CSOs were identified. These proved more difficult to contact and often failed to have working email addresses or phone numbers in service (9.4% response rate). We identified 20 policies from IFs and none from CSOs (see figure 1). Of the 14 CSOs who responded to our inquiry, each indicated that they did not have a policy as they felt it was the responsibility of their IF or national sporting organisation.

As outlined in table 1, seven of the eight types of policies were identified including guidance on training/competition during and following pregnancy (n=6; 2.7%), Eligibility affected or training not advised (n=4; 1.8%), protection from dismissal (n=3; 1.4%), special rank, points or quota protection (n=13; 5.9%), protections apply to adoption, surrogacy, miscarriage, stillbirth, egg freezing and/or fertility treatment (n=3; 1.4%), duration of leave and if leave is paid (n=2; 0.9%) and breastfeeding support/space (n=1; 0.4%). No policies identified specific provisions for childcare support/space. Special rank, points or quota protection is the most frequently included type of support (n=13), followed by guidance on training/competition during and following pregnancy (n=6), while breastfeeding support/space (n=1) is the least frequently included type of support. Fédération Internationale de Football Association (FIFA) provides their pregnant, postpartum and parenting athletes with five types of policy support, while all other organisations provide their athletes with only one (n=12) or two (n=7) types of support (figure 2). Specific details regarding the types of support and policy extracts are detailed in online supplemental table 1.

All policies were published between 2019 and 2024 and are publicly available either via the sport organisation's website or on request. Only one organisation (Union Cycliste Internationale; UCI) reported using an evidence-based development process and stakeholder engagement. UCI utilised the Appraisal of Guidelines for Research Evaluation II instrument with input from female cyclists, including those who have returned to cycling following pregnancy.

Policy characteristics

Training/competition during and following pregnancy

Six organisations provide training guidance for pregnant athletes. For instance, World Lacrosse and World Netball provide similar guidance in that they recommend that member countries use reasonable endeavours to support a safe playing environment for all players, including pregnant athletes, whereas Fédération Equestre Internationale states that the decision to ride while pregnant is made by the rider.

Eligibility affected or training not advised

Four organisations specifically address how athletes' eligibility is affected if they are pregnant, or if training is not advised. Specifically, World Taekwondo prevents athletes from competing while pregnant, as pregnancy is one of many medical conditions that disqualify an athlete from entering a tournament, and World Association of Kickboxing Organisations (WAKO) requires female kickboxers to complete the 'WAKO Non-pregnancy Declaration' in order to compete. UCI athletes who are more than 12 weeks gestation (end of first trimester) are prevented from participating in UCI-sanctioned events, and World Rugby states that rugby is not recommended during pregnancy.

Protection from dismissal

FIFA is the only organisation to include protection from dismissal while pregnant into their maternity policy. FIFA's parental leave policy protects athletes from club termination due to becoming pregnant or taking maternity or parental leave. However, World Lacrosse and World Netball policy encourages National Sport Organizations to view country-specific discrimination laws and act in accordance with such laws, which may or may not include some form of protection from dismissal clause.

Special rank, points or quota protection, including duration of protection

13 organisations provide special rank, points or quota protection to athletes. The duration of this rank/points/quota protection is determined in multiple ways. Many of the policies define protection duration by time (ie, months or years) ranging from 6 months to up to a maximum of 36 months following the birth of a child. For instance, the World Karate Federation allows athletes to request their ranking points be frozen for a maximum of 15 months, while the Women's Tennis Association (WTA) provides a 'special ranking' for athletes for up to 3 years from the first day of leave. Some organisations define their duration based on season or trimester. For example, the International Bobsleigh and Skeleton Federation states, 'if a female athlete misses out for one season due to maternity leave, this female athlete will keep her quota spot in the representative race series when coming back after one season'. Other sport organisations (eg, International Table Tennis Federation) offer graded protection, based on the time taken to return to competition. A notable difference between the rank/points/quota protection between organisations is that some (eg, World Triathlon) require a pregnancy to be more than 20 weeks gestation for an athlete to be eligible for this protection. In comparison, sport organisations such as the Fédération Internationale de Ski et de Snowboard Cross Country do not stipulate that a pregnancy must be more than 20 weeks, rather their policy states that 'athletes will retain 100% of their original points, if they return to sport within 1 year of childbirth'.

Table 1 Characteristics of pregnancy-related and parenting-related policies

Sport organisation (year) Policy name, year of publication	Policy characteristics					
	Training/competition during and following pregnancy	Eligibility affected or training not advised	Protection from dismissal	Special rank, Points or Quota Protection, including duration of protection	Protections apply to adoption, surrogacy, miscarriage, stillbirth, egg freezing, and/or fertility treatment	Maternity/parental leave of absence duration and remuneration
1 Fédération Internationale de Ski et de Snowboard (Cross Country): <i>FIS Rules for Cross-Country Points 2003–2004, 2023</i> ⁴⁹				X		
2 Fédération Internationale de Ski et de Snowboard (Alpine): <i>Rules for the FIS Alpine Points, 2023</i> ⁵⁰				X		
3 Fédération Internationale de Ski et de Snowboard (Snowboard, Freestyle, Freeski): <i>Rules of the FIS points Snowboard Freestyle, Freeski, 2023</i> ⁵¹				X		
4 World Triathlon: <i>2023 Competition Rules</i> ⁵²				X	X	
5 World Curling Federation: <i>World Curling Team Rankings, 2023</i> ⁵³				X		
6 Women's Tennis Association: <i>Official Rulebook 2024</i> ⁵⁴				X	X	
7 International Biathlon Union: <i>Event and Competition Rules, 2023</i> ⁵⁵				X		
8 World Taekwondo: <i>Medical Code, 2019</i> ⁵⁶	X					
9 World Lacrosse: <i>Event hosting and competition manual, 2020</i> ⁵⁷	X		X*			
10 Federation Internationale de Volleyball: <i>Sport Operations manual – Beach Volleyball, 2023</i> ⁵⁸				X		
11 Badminton World Federation: <i>Player Commitment Regulations, 2023</i> ⁵⁹				X		
12 International Table Tennis Federation: <i>World Ranking Regulations, 2024</i> ⁶⁰				X		
13 World Netball: <i>Pregnancy Guidelines, 2021</i> ⁶¹	X		X*			
14 Fédération Internationale de Football Association: <i>Regulations on the Status of Players, 2024</i>	X		X		X	X
15 Union Cycliste Internationale: <i>UCI Cycling Regulations, Part 2 Road Races, 2023</i> ⁶² ; <i>UCI Cycling Pregnancy and Postpartum Guidance, 2023</i> ⁶³	X	X			X	
16 International Bobsleigh and Skeleton Federation: <i>International Skeleton Rules 2023</i> ⁶⁴ ; <i>International Bobsleigh Rules 2023</i> ⁶⁵				X		
17 World Karate Federation: <i>World Ranking Rules, 2023</i> ⁶⁶				X		

Continued

Table 1 Continued

Sport organisation (year) Policy name, year of publication	Policy characteristics					
	Training/competition during and following pregnancy	Eligibility affected or training not advised	Protection from dismissal	Special rank, Points or Quota Protection, including duration of protection	Protections apply to adoption, surrogacy, miscarriage, stillbirth, egg freezing, and/or fertility treatment	Maternity/parental leave of absence duration and remuneration
18 World Rugby: <i>Player Welfare Guidelines – Pregnancy and Rugby Guideline, 2023</i> ⁶⁷	X	X				
19 Fédération Equestre Internationale: <i>Medical Safety Forms, 2022</i> ⁶⁸ ; <i>Horse riding while pregnant, 2022</i> ⁶⁹	X			X		
20 World Association of Kickboxing Organizations: <i>Kickboxing Rules, 2022</i>		X				
Total	6	4	3	13	3	2
X*: Encouraged to view country-specific discrimination.					1	0

Protections apply to adoption, surrogacy, miscarriage, stillbirth, egg freezing and/or fertility treatment

FIFA and the WTA are the only sport organisations to recognise athletes who adopt a child in their policy. Additionally, the WTA explicitly states that when referring to special rank rules, 'parental start' applies to surrogacy, adoption or becoming the legal guardian of a person under the age of 18 years. No policy to date supports athletes who engage in alternative fertility practices, including egg freezing.

Maternity/parental leave of absence duration and remuneration

Only two organisations (UCI and FIFA) have policies that outline financial compensation to athletes taking time off from training and/or competition while pregnant and/or parenting. The UCI provides mandatory maternity leave and health insurance options for women on top-level teams. Self-employed racers are also entitled to maternity leave and health insurance. Athletes receive 3 months of parental leave while receiving 100% of their salary, followed by an additional 5 months at 50% of their salary. FIFA introduced the 'Regulations on Status and Transfer of Players', which states that women players are entitled to 14 weeks paid absence, with at least 8 weeks following childbirth. Athletes will also receive two-thirds of their contracted salary during their leave.

Breastfeeding support/space

FIFA is the only organisation that has a policy regarding breastfeeding support/space provided to their athletes. Facilities to breastfeed or express breast milk should be available to athletes for 30 min, every 3 hours.

Childcare support/space

No organisation has a policy specific to childcare support or space provided to their athletes.

DISCUSSION

We reviewed and synthesised existing policies developed by IFs that were specific to pregnant, postpartum and parenting athletes. Of the 49 IFs/recognised Federations and 170 CSOs recognised by the IOC, we identified 20 IFs with relevant policies. Our review highlights a great disparity between international sport organisations with respect to their policies to support pregnant, postpartum and parenting athletes. Of the relatively few policies that do exist, some (eg, World Triathlon, WTA, FIFA) set precedence for the types of support that could be implemented to support the equitable participation of pregnant, postpartum and parenting elite athletes (see figure 1). However, given the scarcity of policies that have been developed by international sport organisations, and the limitations associated with some of the existing policies, the international sport community is at a critical juncture, and a focus on such policy development and/or improvement is critical.⁸ Findings from this scoping review provide the most up-to-date review of existing international sport policies for pregnant and parenting athletes, and sport organisations can draw on such findings as a resource in the development of their own policies. Fallon *et al* proposed a template to support policy development by IFs for pregnant and parenting athletes. Combined with the current findings, this offers a foundation for IFs to create sport-specific policies in consultation with key stakeholders including athletes, healthcare providers and administrators.²¹



Figure 2 International sport policies for pregnant, postpartum and parenting athletes.

Protection from dismissal as a result of pregnancy or parenting

Maternity rights in many countries specify that pregnancy and being a parent are grounds for protection from discrimination in any form. However, athletes fear disclosure of their pregnancy to their coach, teammates, sport organisations and sponsors for fear of repercussions.^{12 22} As a result, athletes report significant levels of anxiety and adverse mental health concerns while making decisions on when and how to disclose their pregnancy. In addition to mental health concerns, continued sport participation in the absence of support from the multidisciplinary team (MDT) could risk the health of the athlete and/or fetus. FIFA's policy was the only policy identified in this scoping review that

stipulates athletes' protection from termination. In support of the Olympic Movement, and to enhance the health and safety of pregnant and parenting athletes and their babies, all IFs should provide a clear statement that pregnancy and parenting is not grounds for dismissal.

Rules and regulations on point, rank and quota protections

Pregnancy is characterised by significant physiological adaptations that affect virtually every organ system in the body. Following childbirth, these changes gradually regress but can have persisting effects on maternal health and performance.²³ Physical activity and sports participation are associated with

various potential health benefits, including a reduced risk of pre-eclampsia and gestational diabetes,²⁴ yet certain medical conditions can develop where sport participation would be contraindicated.

The perinatal period may also be impacted by serious health complications including depression and anxiety that are diagnosed in up to 20% of individuals.^{25 26} In non-perinatal populations, extensive evidence has suggested that athletes may be at increased risk of mental health complications.²⁷ The combined risk factors of being an athlete and the perinatal period may further increase this risk. There have been calls to action by the American College of Obstetricians and Gynecologists advocating for recognition of the unique challenges of the early postpartum period, including disturbed sleep, increased stress and mental health or other health challenges during this time.²⁸ The aptly named 'fourth trimester' promotes recognition of the first 12 weeks post partum as a distinct period to recover from the impacts of pregnancy and childbirth and promote the health and well-being of both mother and child. Many athletes feel internal and/or external pressure to continue training and/or competing during and following pregnancy, in part due to concerns over contracts, sponsorship, international ranking, points or quotas (particularly in individual sports). Athletes have reported experiencing uncertainty and anxiety regarding their status in sport as a result of the lack of understanding and awareness of what can or should be done during this period.^{8 13}

13 policies protected rank or points for athletes who take time off from training or competition due to pregnancy or maternity leave. Policies detailing the impact of pregnancy and/or parenting on rank, points and/or quotas could alleviate questions and concerns, allowing for informed, athlete-centred decision-making by athletes and their MDT. 'Freezing' rank, points and/or quotas during pregnancy would support athlete choice on the timing of any adaptation to sport training, as well as potentially alleviate anxiety in the event that a medical contraindication is diagnosed. Following childbirth, 'freezing' would facilitate rehabilitation through return-to-sport protocols that maximise opportunities to optimise postpartum performance and reduce injury risk. In the current review, there was substantial variation in the duration of the protection between sports. While the definition of the length of the postpartum period also varies widely, in the sporting context, the IOC Consensus Statement Female Athlete Health Domains has suggested that injury risk as a result of pregnancy or post partum extends to 2 years post partum and would optimally support opportunities to return to sport post partum.²⁹

Access to leave during pregnancy and the postpartum period

Numerous studies have highlighted that athletes, coaches and healthcare providers desire clear and transparent policies that outline athletes' rights related to leave during pregnancy and/or parenting.^{14 22 30} However, only two organisations (UCI, FIFA) specifically addressed leave provisions. These organisations primarily referred to the financial compensation provided to athletes who take a leave from training and/or competition while pregnant and/or parenting.

In addition to reporting potential financial compensation that is provided while on leave, it is critical for all athletes to have access to publicly available policy that outlines the eligibility and duration of leaves, including, but not limited to the birthing and non-birthing parents.

Athletes have also highlighted the need for such policy to clearly state whether leave is available for athletes who are

adopting or having a child via surrogacy, as well as provisions for athletes who have a miscarriage or stillbirth.³¹ It is essential to recognise that maternal physiological changes occur during pregnancy even with a miscarriage, in addition to significant distress and mental health conditions following the loss of a child at any point during pregnancy. Adequate recovery and supports post partum are thus essential to support the health and well-being of the mother. However, few policies included in this scoping review specifically stated the duration of pregnancy that would be required to obtain postpartum supports, and whether an athlete who experiences a miscarriage or stillbirth would be eligible for pregnancy-related leave. Clear, detailed and publicly available pregnancy and parenting leave policies are essential for supporting athletes in making informed family-related decisions and, ultimately, to supporting the equitable participation of women in elite sport.

Access to lactation and childcare spaces

The WHO encourages breastfeeding up to the first 2 years of life to ensure adequate infant nutrition, and a growing body of research has also demonstrated the cardiovascular benefits of breastfeeding for the mother.³² While engaging in physical activity is established to be safe and beneficial during lactation, there is an absence of data specific to high-performance athletes.^{33–35} As lactation is highly energetic (~450–500 kcal/day), ensuring adequate nutrition and hydration is essential.³⁶ This may be especially important for athletes where the combination of lactation and elite sport has been hypothesised to increase the risk of developing low energy availability (LEA) or relative energy deficiency in sport (REDs). Or conversely, LEA and REDs may adversely impact lactation.³⁷ While some athletes wish to discontinue breastfeeding following return to sport, others have expressed that they wish to continue breastfeeding but were unable to do so due to a lack of support, location and opportunity.^{13 22} To date, only FIFA has explicitly outlined the expectation to provide a designated space at regular intervals for lactating athletes to breastfeed or express their milk. As the number of athlete-mothers grows, there is a critical need for all IFs to provide spaces to support athletes who choose to continue breastfeeding following return to sport.

Of the policies included in this scoping review, no organisations have outlined whether children can access training and competition venues, or whether there are spaces for childcare onsite. Research has demonstrated that a lack of childcare options is a further barrier to elite sport participation both for those who are parents, as well as those who are considering starting a family.^{13 38 39} Given the successful implementation of the Pampers Nursery in the Athletes Villages in Paris 2024, we anticipate other major sporting events will build on this success.

Evidence-based guidance on training and competition during or following pregnancy

Physical activity guidelines from around the world have demonstrated the safety and health benefits of continued sport participation during and following pregnancy for the general obstetrical population.^{10 40} In 2016, the IOC produced five documents summarising recommendations on athletic training for pregnant and postpartum athletes.^{41–45} Although athlete-specific evidence was extremely limited at the time, the panel provided several key considerations for the athlete and MDT regarding safe sport participation. Given the limited scope of evidence, the authors recommended that athletes be closely monitored by their obstetric care provider to provide individualised guidance and

monitor the growth and development of the fetus. As a result of the policies included in this scoping review, some organisations have explicitly stated that decisions around sport participation during pregnancy require consultation with medical professionals and to follow their medical advice.

Athlete-centred care with their MDT is strongly encouraged, yet there is a lack of sport-specific evidence to guide elite-level sport participation during pregnancy and return-to-sport post partum. Findings from Wieloch *et al*'s recent scoping review outlined the lack of high-quality studies and direct evidence related to pregnant elite and amateur athletes.¹¹ As a result, organisations are placing the onus on clinicians and/or athletes to make critical decisions on how to balance the physical and psychological risks of pregnancy and post partum alongside the training demands of elite sport. Given the lack of available guidance and research to support such decision-making in elite sport, this places a heavy burden on them to make difficult decisions with inadequate support. In the development of sport policy by IFs, it is essential that clinicians (as well as other stakeholders) are consulted to ensure that the role of the clinician in making these decisions is clarified. Further, knowledge and awareness of expected decisions that clinicians working with athletes may need to make if one of their athletes becomes pregnant or returns to sport post partum is essential.

Subsequent to the release of the 2016/2017 IOC guideline, a growing body of research has been published that builds evidence specific to elite athletes that continued participation is not associated with adverse pregnancy, childbirth or postpartum complications.^{15 46} Importantly, such research with pregnant and parenting athletes, including qualitative research that is grounded in the experiences of athletes, has also highlighted a broad range of psychosocial barriers and facilitators that shape athletes' experiences training and competing during pregnancy, post partum and or as a parent.^{7 8 12 13} Furthermore, anecdotal and empirical research is demonstrating that most athletes who return to sport post partum have maintained or even increased performance.⁴⁶ However, updated sport-specific guidance is urgently needed to support informed decision-making to support perinatal athletes.

Pregnancy as a disqualifying medical condition

While there is growing support for the safety of continuing elite-level sport during pregnancy,^{15 46} the impact of contact sports on the health of the fetus has not been established. Direct trauma to the pregnant abdomen can carry the risk of harming the fetus. While the fetus has some protection from the uterine wall and amniotic fluid, harm may still occur from direct and indirect trauma. Contact resulting in a loss of amniotic fluid increases the risk of infection and premature labour, while shear forces have been proposed to cause placental abruption where the placenta separates from the uterus. To date, no study evaluating contact on maternal or fetal health has been published. The IOC recommends avoiding full contact sport (eg, boxing) from the point of conception to minimise risk to the baby.⁴¹ In sports where some contact may occur (eg, football), the IOC and others generally suggest pregnant women may continue until the end of the first trimester when the uterus is protected by bony structures.⁴¹ While policies included in this review generally followed these recommendations, several included a caveat that the decision to participate rests with the athlete. Although this provides essential autonomy to the athlete to make decisions about their sporting career and pregnancy health, the lack of empirical research means these decisions must be made in the absence of informed clinical opinion. Future research in this area

is essential to understand the true risks of contact sport, at any point during pregnancy, on maternal and fetal health.

Strengths and limitations

This is the first published scoping review to synthesise IF sport policies that are specific to pregnant, postpartum or parenting high-performance athletes. Findings from this research provide critical insights into current policies, as well as policy gaps that must be addressed. A key strength of this research is that an extensive four-step search strategy was used to identify all relevant policies. All policies were identified either through the Google search, targeted search via websites of IFs and CSOs, or through direct contact with IFs and CSOs. The response rate from IFs was remarkable (95.9%) but contact with CSOs was much more difficult, and therefore, there is the possibility that policies do exist within CSOs but they are just not readily available.

Conclusions

In support of a growing number of athlete-mothers, international sporting organisations have begun to develop sport-specific policies for pregnant, postpartum and parenting athletes. However, there remain significant gaps in support for these athletes, as fewer than half of IFs and no CSOs had policies in place to support the careers of athletes. Policies to support pregnant, postpartum and parenting athletes play a critical role in facilitating optimal performance and enhancing long-term athlete health.⁴⁷ Furthermore, international policies to support pregnant and parenting athletes are essential for addressing gender inequities that are deeply entrenched across all levels of sport.⁴⁸ The identified key gaps and considerations should be incorporated in future policy work.

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