Unique Considerations for Female Athletes: A Psychiatric Perspective

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ABSTRACT

The health and sport experience of the female athlete is poorly understood and their study is underdeveloped. It is important for mental health providers to have an awareness of the specific factors that can influence female athletes' health and sport experiences for effective assessment and management. Myriad biopsychosocial and cultural factors create challenges for female sport participation. The culture of sport can set the stage for developmental compromises expressed in disordered eating, body image dissatisfaction, increased anxiety and depression, and identity formation. Biological changes that occur during puberty, menses, pregnancy, and menopause can impact female participation and performance in sport. It is vital to engage, equip, and empower female athletes to participate in physical activity across the life span and through different reproductive stages. Clinical assessment and management of female athletes should follow clinical practice guidelines through a sports lens to optimize comprehensive care. **[*Psychiatr Ann*. 2024;54(11):e295-e300.]**

Female athletes experience sports differently than males. It is important for mental health providers to have an awareness of the specific factors related to the female health and sport experience to engage in effective assessment and management. While women's sports are experiencing a surge of interest and popularity, important elements related to the health and sport experience of female athletes are poorly understood and underdeveloped.

In this article, key topics will be explored to enhance the reader's understanding of factors that may contribute to mental health challenges experienced by female athletes. These include barriers encountered in biopsychosocial domains, sport-related sociocultural influences on body image and eating, female-specific health concerns as they interface with sport, and reproductive health and its reciprocal relationship with sport. Differences in the symptom complex and recovery from concussions for female athletes will also be explored, as well as the epidemic of gender-based and intimate partner violence.

BIOPSYCHOSOCIAL OBSTACLES FOR WOMEN IN SPORT

Myriad biopsychosocial obstacles can interfere with females' participation in and experience of sports and exercise. Biological hindrances faced by female athletes are numerous, including physical and physiological differences across the lifespan. Hormonal influences on body changes during adolescence affect body morphology, muscle development, and fat distribution differently than male athletes.[1] Endocrinological changes during menses can create pain, bloating, excessive bleeding, mood changes,[2] and increased risk of injuries (including ACL tears) due to changes in ligament laxity. Cis-gendered female athletes are

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two to three times more likely than their non-athlete counterparts to experience menstrual dysfunction such as amenorrhea or oligomenorrhea.[3] Biomechanical differences related to basic female anatomy can also lead to increased injury rates. Female soccer players are three to six times more likely to experience ACL injuries than their male counterparts,[4] and female athletes are also more prone to other types of knee pain and bone stress injuries.[1] Breast development also significantly influences sport participation by women. Sport participation has been found to decrease as breast size increases, with barriers to activity including inability to find a proper-fitting sports bra and embarrassment about breast motion during sports.[5] Significant biological changes occurring in the female athlete's body during other key timeframes include peri- and postpartum periods as well as peri- and postmenopause. These changes are further explored in a later section.

Female athletes who sustain sport-related concussions (SRC) may have a more complex and protracted course of recovery than their male counterparts.[6] Female athletes demonstrate higher postconcussive symptom (PCS) scores, have slower reaction times relative to baseline, display greater cognitive decline, have more prolonged concussion-related symptoms, and take longer to return to sport after experiencing SRC.[6] Research suggests that menstrual cycle phase at the time of concussion is predictive of outcomes among women.[7]

From a psychological perspective, challenges experienced by women in sport include body image concerns[8] and stigma that women are weak or subordinate. Sexual harassment and abuse affect significantly more female athletes than male athletes, and is debilitating, shaming, isolating, and traumatic for victims.[9,10] The process of reporting harassment and abuse is often prohibitively difficult to navigate, lengthy, and retraumatizing. Anxiety and depression are more likely in female athletes than male athletes, and the presence of anxiety disorders has been shown to double the likelihood of sustaining a sports injury.[8,11] Sports injuries can result in exacerbation of mental disorders such as depression, anxiety, posttraumatic stress disorder, body image disturbance, and disordered eating or eating disorders. Negative psychological responses to injury can further impede postinjury recovery and return to sport.[12]

Certain social barriers exist in cultures and religions that define roles of women in society and regulate approved attire. Women have faced exclusion from sport because of culturally mandated clothing in certain sports and in countries that ban items such as the hijab.[13,14] Sexualization of female athletes in the media leads to objectification and reinforcement of gender stereotypes rather than portrayal as skilled athletes. This occurs through the apparel they are required to wear, media focus on their bodies, and selection of provocative photographs. Female athletes who demonstrate intensity during competition are often labeled as angry or overly aggressive. Financial inequities exist at most levels of sport, as male athletes are paid significantly more than their female counterparts. Gender inequality in sports science and exercise research contributes to the underdevelopment of programming and support for female athletes, and women continue to fight for equal pay, respect, media access, broadcasting, and access to appropriate equipment, facilities, and uniforms.[15]

It is important for mental health practitioners to screen for other types of violence that may be experienced by female athletes. Women and girls face sex- and gender-based discrimination, violence, and other forms of mistreatment. Physical and psychological violence, coercive control, exclusion from sports, and economic and online violence are just a few examples.[16] Intimate partner violence is a silent epidemic, and the true incidence is likely underreported. Elite sports do not protect against gender-based violence, and women at all levels of sport participation should be screened.

SOCIOCULTURAL INFLUENCES ON FEMALE ATHLETES

The intersection of women and sport is subject to the same sociocultural influences as general society. Female athletes, particularly young female athletes who compete and train in "lean" sports, are more prone to eating disorders and body dissatisfaction.[17] Body image is an important aspect of an athlete's health, identity, and sense of well-being.[18] The culture of sport, participation in which can begin early in childhood, often has rigid expectations, weight-related beliefs, and influences from family that can set the stage for developmental compromises expressed in the form of body image dissatisfaction.[19]

Increased praise and reinforcement for particular body types can create a sense of normalcy, inciting unconscious efforts to conform in order to compete. Behaviors such as mirror checking, excessive grooming, and reassurance seeking can become compulsive in nature.[20] Individuals with positive body image have increased confidence and self-esteem, whereas negative body image can affect performance, concentration, and confidence, as well as being a risk factor for developing eating disorders.[20] This process can conflict and interfere with the developmental tasks of increased autonomy, identity, and self-efficacy.[19]

Social media exposure can significantly influence eating behavior, body image, and overall well-being. Greater social media exposure negatively impacts athletes, with an increase in disordered eating and body dissatisfaction, and an overall increase in mental health symptoms.[20,21] Given the nature of sport

culture with a focus on ultra-fitness and performance, athletes can have little insight into their perceptual distortions in terms of their appearance.[19]

Early recognition and intervention of these conditions are important for management and prevention of potentially severe psychological and general medical sequelae.[19] Diversified treatment approaches are an important future direction for guiding the multidisciplinary team in the comprehensive care of the athlete.[19] Consideration of implementing protective measures are recommended.[20]

SPORT AND WOMEN'S HEALTH ACROSS THE LIFESPAN

Women uniquely experience fluctuations in physiology across the lifespan that influence their sport experience. Biological changes that occur during puberty, menstrual cycles, pregnancy, and menopause can impact female participation and performance in sport as compared to their male counterparts.

Menstrual Cycles

Adolescence is a pivotal stage for girls in sport, as girls have been reported to drop out of sport twice as frequently as boys during that timeframe. The start of menstruation is cited as one of the most common reasons for girls deciding to leave sports.[22] The menstrual cycle is a complex physiological process, with marked variability in individual experiences directly impacting the ability to complete quality research, especially in sport-specific research. In the general population, women with premenstrual symptoms report more work absences, higher medical expenses, and a lower quality of life related to health.[23] The impact of hormonal and physiological changes during the menstrual cycle has inconsistent evidence with respect to potential impacts on athletic performance due to factors such as inflammation, metabolism, and changes in body composition.[2] However, perception of a negative impact on performance by the individual athlete is well documented.[2] Some female athletes attempt to attain amenorrhea because of the perception of negative impact on performance or the belief that optimal training leads to a lack of periods. Without appropriate awareness or intervention (especially in the adolescent period when 50% of peak bone mass is acquired), athletes are at increased risk of the development of stress fractures, early osteoporosis, and cardiovascular consequences.[24] Relative energy deficiency in sport (RED-S) is a clinical condition that describes additional consequences of a mismatch of intake to energy output. The consequential array of systems potentially impacted by RED-S include growth, immunity, endocrine and cardiovascular function, bone health, energy, sleep, and mental health.[25]

At this juncture, evidence-based recommendations do not exist to optimize women's performance in sport and ultimately their overall well-being as it pertains to menstrual cycles.[26] This limits the ability of sport physicians, coaches, and others in the athlete entourage to provide confident guidance and advice to female athletes.

While previously a taboo topic, feminine hygiene products have emerged as a popular discussion point in women's sport. Access and affordability, comfort, and the impact of athletic gear on comfort during menstruation have been identified as important considerations in training and competition. Concerns about the effectiveness of sanitary products was demonstrated to contribute to worsened sleep in college-level female athletes, which can negatively impact recovery from sports.[27] Increasing awareness and discussion around the impact of menstruation in elite athletics is likely to have a significant and positive impact on athlete comfort, confidence and performance.

Pregnancy and Postpartum

Physical activity is recommended in preconception and pregnancy for a wide variety of physical and emotional health benefits. However, because the age of peak athletic capability overlaps with the peak fertility window, female athletes often must choose between motherhood or their athletic careers. Women who delay pregnancy to pursue athletics may struggle with lower fertility rates and complications related to pregnancy in advancing age.

There is a lack of research into the impact of high-intensity exercise in pregnancy, and generally there is no evidence that increased intensity of exercise contributes to adverse effects for the mother or fetus. However, adjustments may be required over the trajectory of pregnancy and in the postpartum period in order to accommodate physiological changes related to weight gain, anemia, and joint laxity.[28] There is a gap in available resources for pregnant and postpartum mothers to successfully meet the demands of their dual roles. Suggestions have included women-only spaces, affordable child care, breastfeeding spaces, and education around adjusting exercise for postpartum bodies.

Perimenopause and Menopause

Increased age can lead to increased musculoskeletal injuries, in part due to hormonal, physiological, and anatomical changes.[29] The decline in estrogen and progesterone in this period leads to lower quality sleep, autonomic symptoms, and reduced bone density and aerobic capacity, which have the potential to reduce performance over time. Physical activity is overlooked as a strategy to support a woman's healthy reproductive lifecycle and co-occurring mental health. Exercise can be beneficial even when not strenuous or structured. Physical activity can empower women, foster a culture of self-care, build communities, reduce feelings of loneliness, and improve health and well-being outcomes.

DISCUSSION

Advances for women in sport have accelerated in the last 5 years relative to the pace of change in the previous century. Sociocultural myths and erroneous assumptions about equipment, apparel, and facilities associated with male athletes has interfered with appropriate development of knowledge, technology, and sports science relating specifically to female athletes. Opportunities to engage in sports have expanded for women over time; however, many obstacles persist and have resulted in negative outcomes for mental and physical health. Anatomical and physiological factors, discrimination, harassment, abuse, objectification, sexualization, and lack of adequate support for programming, equipment, and facilities are just a few of these barriers faced by female athletes globally.

The emergence of high-profile female athletes and accompanying media coverage has propelled the female athlete to the forefront of sport. Injury reporting facilitated the identification of trends, which raised awareness of differences in injury rates experienced by female and male athletes. Intentional research agendas dedicated to health surveillance of female athletes and investigation of the effects of hormonal changes, pregnancy, and menopausal status on mental health, well-being, and performance have provided greater understanding of these areas. Specific education regarding women's health to individuals who have key roles in coaching, training, or supporting female athletes is currently lacking. Discussion of female health topics including menstruation and body changes is important to comprehensively explore factors that may impact female athlete health and sport participation. To truly provide appropriate support to optimize well-being, health, and performance, stakeholders must understand and appreciate the unique needs of female athletes. This applies to international sport federations, national funding bodies, sports organizations, teams, staff, care providers, and the athletes themselves.

Female athletes experience biopsychosocial and cultural influences that impact mental and physical health as well as sport participation. Understanding these factors will enhance the mental health practitioner's ability to comprehensively assess and manage mental health challenges experienced by female athletes. Athletes presenting with mental health symptoms should undergo assessment including clinical interview and use of established screening and assessment tools, with consideration of sport-specific elements that can influence their symptoms. Sport-specific elements include team dynamics and relationships, performance concerns, pressure, lifestyle balance, playing opportunities, competitive career trajectory, and interruption due to injury or illness. Best-practice guidelines for management of mental health disorders should be implemented with consideration of these unique factors.

CONCLUSION

Female athletes can be fierce competitors who embody the full intensity of sport, while at the same time being thoughtful scholars and loving mothers. Once given an opportunity to compete, women have demonstrated the ability to run fast, jump high, crush a ball, bury a puck, and accept any challenge extended to them. Society has responded to the demonstration of female athletic prowess with record-breaking viewing and attendance records for events, and professional sports leagues for women have emerged and expanded over the past 5 years. The world is watching, and the sports world is learning. It is vital to recognize the unique biopsychosocial challenges and needs of women in sport. Female athletes experience sport, injuries, and recovery differently from male athletes. Every athlete has the right to an environment that is free of harassment, abuse, and neglect. Sports do not protect female athletes from gender-based and intimate partner violence. Awareness of the incidence, types, and risk of violence is essential to provide screening and protection for all female athletes.

Care providers have an important role in ensuring that the needs of female athletes are appropriately recognized and addressed. To encourage and facilitate ongoing growth in women's sports, it is vital to understand and research the needs of female athletes, and, most of all, to engage, equip, and empower female athletes to participate in sports and physical activity across the life span and through the different reproductive stages that they may experience. The emergence of women's sports presents an opportunity to appreciate the incredible athletic abilities demonstrated by these athletes and support ongoing growth through funding, research, media access, broadcasting, and equalization of opportunities and earnings.

Providing comprehensive assessment and management of female athlete mental health includes biopsychosocial assessment of the presenting symptoms through a sport-informed lens. Clinical inquiry should be supported with consideration of sport-specific factors, and best-practice guidelines can be implemented with integration of sport-related components. This can include psychotherapy skills that can be implemented in the sport setting, and choice of medication that considers factors such as weight gain and sedation which can negatively impact the sport experience. Knowledge of medications that are prohibited in sports or that require therapeutic-use exemption forms is also important.

When sport-related factors are prominent components of the primary presenting concern, it is important to consider referring the athlete to practitioners with specialized skills and knowledge related to sports and mental health. Sports psychiatrists, psycholo-

gists, and social workers can provide specialized expertise in the management of athlete mental health.

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