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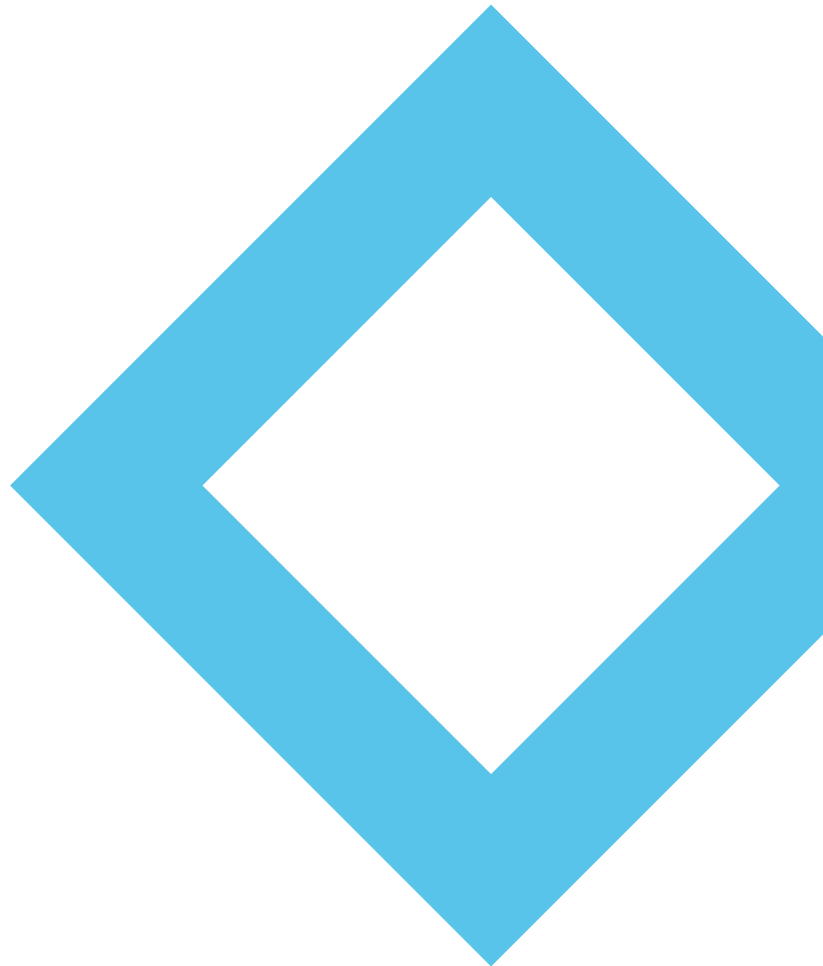
MELBOURNE AUSTRALIA

THE NEW WAY TO DO UNI

TOWARDS IMPROVING THE SAFETY AND WELLBEING OF WOMEN IN SPORT

Institute of Health and Sport

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from the Australian Government



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INTRODUCTION

There is a critical need to advance the understanding of gender-specific factors that impact the mental health and wellbeing of Australian women athletes (from here on referred to as ‘athletes’).

Determining the factors that positively contribute to athletes’ wellbeing is crucial for the development of evidence-informed strategies that support and better target the needs of athletes.

In order to address and improve the wellbeing of women athletes, it is necessary to examine gender-specific stressors.

The primary aims of the research investigation were to:

- ◆ Ascertain the current status of mental health and wellbeing in women elite and semi elite athletes (athletes who are financially supported by a sporting organisation or are paid to train and compete in their sport).
- ◆ Identify and understand the psychosocial stressors experienced by athletes.
- ◆ Report on safety and exposure to violence.



The project utilised a mixed-methods approach, including a self-report online survey followed by semi-structured interviews. Overall, 53 athletes from Golf Australia (GA), Rowing Australia (RA) and the Australian Football League Women’s (AFLW) responded to components of the survey, with 39 (74% of total survey respondents) completing it in full. The survey included standardised scales, as well as purpose-developed tools, to collect data on demographics, wellbeing, support and coping, and safety. After completing the survey, 6 respondents agreed to participate in semi-structured interviews. These interviews allowed for an in-depth exploration of personal experiences of athletes regarding financial security.

INTEGRATED FINDINGS

For quick reference, provided below is an integrated summary of the key findings from all athletes that participated in the online survey and interviews.

Financial Factors

- ◆ Many athletes reported having just enough money to make ends meet and expressed concerns around a lack of financial literacy and future career planning opportunities. Athletes believe they have worse prospective employment opportunities than men athletes and believe their future income prospects to be worse than the general population.
- ◆ Athletes reported high out of pocket expenses to play sport, financial dependence on family, limited awareness of organisational supports available to them, and a lack of confidence in discussing employment conditions with sporting organisations.

Experience of Violence

- ◆ Many athletes stated they had experienced interpersonal violence in sport (i.e. psychological, physical, sexual or online violence).

Mental Wellbeing and Quality of Life

- ◆ Psychological distress amongst this cohort of athletes was higher than representative national or state-wide norms in the general community, and higher than distress levels reported from a previous study with Australian Institute of Sport athletes.
- ◆ Around half the of athletes reported experiencing threshold depression symptoms and at least mild anxiety, both of which were associated with exposure to sport-related violence. Athletes expressed a desire for greater mental health and wellbeing supports.
- ◆ The majority of athletes reported at least moderate athlete-related psychological strain, or a state where excessive demands are made usually due to an emotional overload which is associated with worse mental health.
- ◆ Most athletes reported that they were satisfied or extremely satisfied with their lives and reported drinking behaviours that were comparable with community norms.

These findings need to be interpreted with caution due to the modest response rate to the survey. Therefore, this data may not represent the experiences of all AFLW, GA and RA athletes.

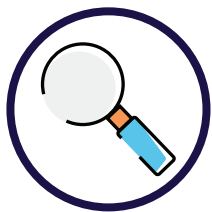
SURVEY

Methods

Athletes from RA, AFLW and GA were invited to participate in an online survey. Overall, 53 responded to components of the survey and 39 completed it in full.

Several reliable and valid standardised scales, as well as purpose-developed measures, were included in the study to collect data on a range of variables, including:

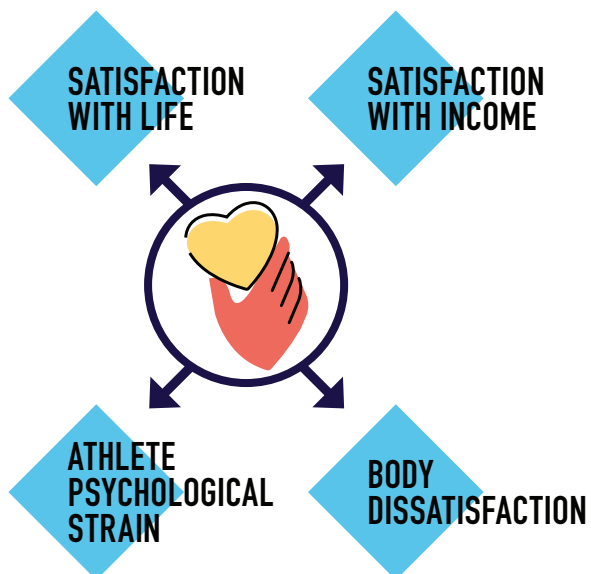
Demographics



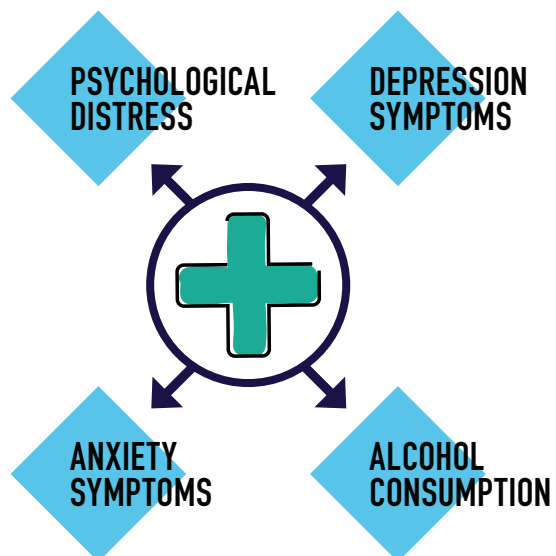
Safety



Wellbeing



Mental Health



Data Analyses

Categorical variables were summarised using frequencies and percentages, and continuous variables using means and standard deviations (SD). Correlation analyses were conducted using Spearman's tests for non-parametric data.

Results

Demographics of Survey Respondents

Table 1 presents the demographics of the 53 athletes who took part in the survey. The average age of athletes was 24 years.

Table 1 – Demographics of athletes (n=53)

		% (n)
Gender		
	Women	98 (52)*
Marital Status		
	Married	6 (3)
	De facto	11 (6)
	Never married	83 (44)
Employment Status Outside of Sport		
	No employment outside of sport	23 (12)
	FT employment	17 (9)
	PT employment	23 (12)
	Casual employment	38 (20)
Study Status		
	Currently Studying	49 (26)
	FT student	26 (14)
	PT student	21 (11)
	Other	2 (1)
Education Levels		
	Year 12 or equivalent	55 (29)
	Diploma or Advanced Diploma	4 (2)
	Bachelors Degree	36 (19)
	Postgraduate Diploma, Degree or Masters	2 (1)
	Other	4 (2)
Parenting Status		
	Has children	2 (1)
Sexual Orientation		
	Straight	77 (41)
	Same sex attracted/gay	7.5 (4)
	Bisexual	7.5 (4)
	Prefer not to say	7.5 (4)
Place of Birth		
	Born outside of Australia	9.5 (5)
Language		
	Primary language other than English	2 (1)

FT= Full time; PT= Part time; % shows the valid percent. *One participant identified as non-binary

Summary of Wellbeing

In order to contextualise the findings, we compared the combined results from the current study with available outcomes for the general population and an existing dataset of Australian Institute of Sport (AIS) athletes.

Table 2 presents the scores on the outcome measures for:

1. Women athletes from our three surveyed sports,
2. All athletes (men and women able-bodied and para-athletes) registered with the AIS (data drawn from a previously conducted cross-sectional, anonymous, online survey study [9] administered to all categorised (e.g. highest level) athletes, aged 17 years and older, registered with the AIS) and
3. Representative community norms.

The average athlete who responded to our survey is 24 years old, not married and has other employment outside of their sport. The average athlete has at least a Year 12 education level, does not have children, speaks English at home and was born in Australia.

A third (31%) of athletes reported that they have just enough money to make ends meet, and a further 2.4% reported that they often cannot make ends meet. Most athletes (82%) perceived their employment opportunities to be better or the same as others who have not had careers in sport, however over half (60%) felt that their employment opportunities are worse than men athletes who have had careers in sport. Respondents commonly (40%) perceived their future income to be worse than peers who have not had careers in sport.

Many athletes reported that they had been exposed to interpersonal violence in sport from peers (50%), coaches (42%), parents (43%) or online (cyber) abuse (33%). Of the athletes that reported exposure to violence, 76% reported having experienced psychological violence (e.g., verbal abuse), 28% reported having experienced physical violence and 27% reported having experienced sexual violence. Exposure to violence was associated with greater psychological distress, increased drinking behaviour, lower life satisfaction, and higher levels of anxiety and depression symptoms.

The majority of athletes (58%) reported levels of psychological distress indicative of at least a mild mental disorder or higher severity. The average levels of psychological distress reported by survey respondents is higher than athletes from the AIS and representative national or state-wide community norms (Table 2). More psychological distress was associated with having experienced more exposure to violence from peers and parents, as well as greater body and shape dissatisfaction.

Half of the athletes (50%) reported threshold depression symptoms and Table 2 shows that mean depression scores are higher than published community norms. More depression symptoms were associated with having experienced more exposure to violence from peers, coaches and parents.

Over half the of respondents (60%) reported experiencing at least mild anxiety symptoms and mean anxiety scores were higher than published community norms (Table 2). More anxiety symptoms were associated with having experienced more exposure to violence from peers and parents.



Most athletes (74%) reported that they were satisfied or extremely satisfied with their lives. Lower satisfaction with life was associated with experiencing more athlete-related psychological strain, anxiety symptoms, depression symptoms, and psychological distress, as well as more exposure to violence from coaches, and parents.

More athletes reported risky alcohol consumption compared with athletes from the AIS, however women athletes reported rates that were comparable with community norms (Table 2). More drinking behaviour was associated with having experienced more violence from peers and greater body and shape dissatisfaction.

Most athletes (78%) reported experiencing at least moderate athlete-related psychological strain. Greater reported athlete-related psychological strain was associated with higher psychological distress, depression and anxiety symptoms, and exposure to violence from peers and coaches.

Many women athletes reported body weight and shape dissatisfaction, which was higher than athletes from the AIS and community norms (Table 2). More weight and shape dissatisfaction was associated with experiencing more depression symptoms.

Mental Health and Wellbeing Symptoms

Table 2 – Mental health symptoms among athletes compared to community data or demographically appropriate community control samples

	AFLW/GA/RA (n=52) Mean (SD)	AIS athletes (n = 749) Mean (SD) [9]	Published community norms Mean (SD)[Ref]
Psychological distress: K-10 total score	22.8 (7.6)	16.40 (5.89)	14.9 (0.2) [10]#
Depression: CES-D total score	17.4 (9.1)		11.12 (1.56)[11]#
Anxiety: GAD-7 total score	6.3 (4.8)		4.9 (4.8)[12]
Satisfaction with life scale: total score	27.6 (4.8)a	26.6 (5.95)	23.1 (6.12) [13]*
Body weight & shape dissatisfaction*	32%b	19.5%	24.4% [14]
Risky alcohol consumption threshold	23.3%b	15.3%	24.0% [15]#

a: n=50; b: n=53 #Representative national or state-wide norms: *Representative community control sample: adolescents.

K10 Score: Likelihood of having a mental disorder: 10-19 Likely to be well; 20-24 Likely to have a mild disorder; 25-29 Likely to have a moderate disorder; 30-50 Likely to have a severe disorder. CES-D scores: Scores of 16 indicate individuals at risk for clinical depression. GAD-7 Scores: 0-4 = None-Minimal anxiety; 5-9 = Mild anxiety; 10-14 = Moderate anxiety; 15+ = Severe anxiety. * A higher percentage on body and weight dissatisfaction represents more dissatisfaction. Risky alcohol consumption was classified as a total score greater than 8.

INTERVIEWS

Methods

The financial wellbeing of athletes was explored to better understand the impact of gender specific psychosocial stress factors on the wellbeing and safety of women in sport, as financial concerns were commonly reported within the survey. Athletes were asked about their employment situation, experience of financial concerns, other work outside of their sporting commitments, views about future employment opportunities, as well as their view of financial stability compared with other people (athletes and non-athletes).

Design

Semi-structured interviews, guided by Thematic Analysis.

Athletes Interviewed

Six current elite athletes from Australia representing Rowing Australia (RA), Australian Football League Women's (AFLW) and Golf Australia (GA) took part in a semi-structured interview.

Data Collection and Analysis Procedures

Interviews were conducted online via Zoom™. A semi-structured interview guide was used during each interview to focus the discussion. Athletes were asked about their employment situation, experience of financial concerns, other work outside of their sporting commitments, views about future employment opportunities, as well as their view of financial stability compared with other people (athletes and non-athletes).

The interviews were digitally recorded and then transcribed verbatim. The transcribed data was analysed using thematic analysis to uncover key themes representing the athlete's concerns regarding financial security.

Key Themes

Thematic analysis of the 6 semi-structured interviews identified themes relating to financial wellbeing. There were four higher order themes: financial **security** being an elite women athlete, **knowledge** of accessible support, **satisfaction** of financial circumstances, and financial **support** from family (Figure 1). Exploration of these higher order themes, their lower order themes and sub-themes formed the basis of the results and are described in detail below.

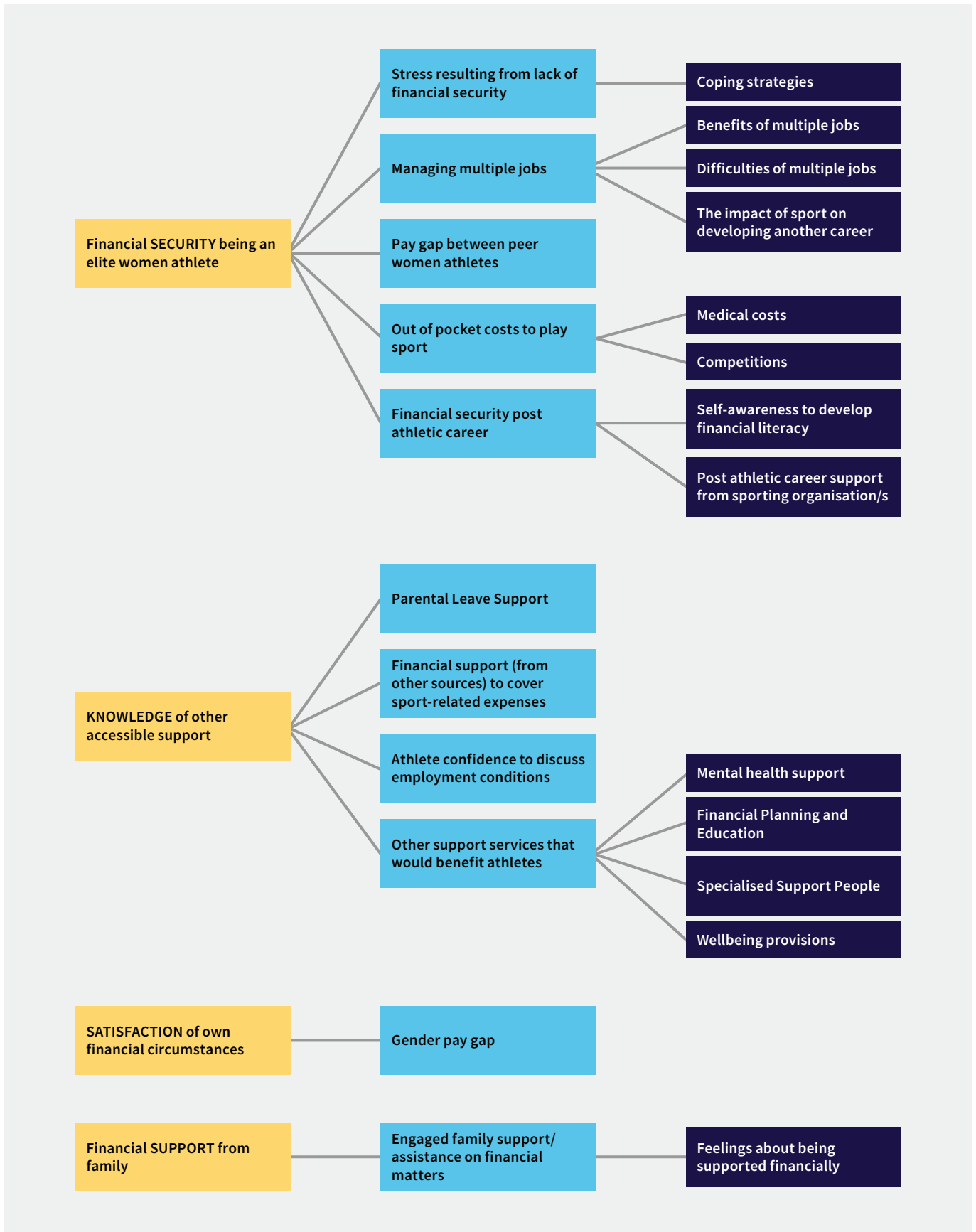


Figure 1 – Women athlete emergent themes from interview transcripts: higher- and lower-order themes, and sub-themes

Summary of Interview Results

Theme 1: Financial SECURITY Being an Elite Women Athlete

Stress Resulting From Lack of Financial Security

Athletes perceived a lack of financial security in their sport was a source of stress.

“

I think the financial wellbeing of athletes, you know, like sport, it's something that does stress a lot of people out and a lot of people do leave the sport because of it not being a professional, professionally viable.

”

Coping Strategies

Athletes reported using coping strategies to manage financial instability. These included working in jobs outside of their sport, continuous saving and mindful in their spending, and being highly organised in their lives in order to meet sport and work commitments.

“

...time management at the end of the day, so lots of scheduling and (a coping strategy is) time management.

”

Athletes also reported other strategies that helped them to maintain wellbeing including using physical activity as a form stress management, engaging in enjoyable activities outside of sport, creating and maintaining boundaries around their sporting lives.

“

Yeah, whenever I'm feeling stressed, it's exercise that sort of makes me feel so much better.

”

Managing Multiple Jobs

Athletes commonly reported working jobs outside of their sporting careers, including full time, part time, and casual work, as well as studying.

Benefits of Multiple Jobs

The reported benefits of having a job outside of their sports included, filling in time (i.e. between training sessions), providing a break from sport, gaining skills that enable them to be a better athlete, feeling a sense of purpose and sense of reward from work, more financial security, and developing an identity outside of sport. Forming an identity other than that of an athlete was highlighted as being particularly important as athletes were aware that they would not be able to continue their athletic careers throughout their entire working lives.

Difficulties of Multiple Jobs

Athletes reported having another job outside of their sport was difficult to manage multiple demands and an increased mental load, which could be demotivating and impact their ability to train effectively.

The Impact of Sport on Developing Another Career (Post-sport Planning)

Having a career or job outside of their sport that offered the flexibility they required was reported as a limiting factor in the choice of positions/roles. Athletes commonly reported they prioritised selecting jobs that allowed them flexibility to meet their sport requirements, rather than working the jobs they would prefer to be doing or working in fields related to their area/s of study.

Pay Gap Between Peer Athletes

Athletes reported that financial wellbeing was highly variable in their respective sports as there was a large pay gap between the highest paid and lowest paid athletes. Those athletes that were not receiving any or were receiving only very limited financial support or remuneration from their sport reported that they experienced the greatest financial stress.

Out of Pocket Costs to Play Sport

Medical Costs

The degree to which athletes had out of pocket expenses for sport-related medical costs was dependent on their sport. For those athletes that had out of pocket expenses, they reported such costs were due to the financial support offered through their sport club/organisation being limited or insufficient.

Competitions

Athletes from GA and RA reported having some out-of-pocket expenses related to participating in competitions or tournaments that were not covered by their clubs or associations.

Financial Security Post-athletic Career

Self-awareness to Develop Financial Literacy

Athletes reported learning about finance management predominantly from family and coaches. Athletes expressed a desire for further education around ways to invest their money or to use it (more) wisely, noting that such skills were not taught at school. Athletes noted a desire to get conversations started early about financial wellbeing and literacy and reflected concern that their financial situations would not be good after retiring from their athletic careers.

“

...so I think, yeah, in terms of long term, and transitioning out of the sport, I think that's really the only way you can prepare for that. Just having a good saving plan because the last thing you want is to, you know, be 30, or 40 and not have any super, no savings and having to start from scratch when your careers ultimately peaked and be kind of on the downhill.

”

Post-athletic Career Support From Sporting Organisation/s

Many of the athletes stated they were working and/or studying in addition to pursuing their athletic careers, but it was a challenge to focus on post-sport career planning or advancing their careers outside of sport while developing their athletic careers. Athletes reported not having a post-sport career plan and were concerned about their career prospects post-sport, whilst some athletes reported that they believed their sporting careers would create new employment opportunities for them post-athletic retirement. Athletes shared it is important to maintain sufficient time in their sport schedules to develop other careers or pursue education and having conversations about career planning to ensure the ability to secure a desired job post-athletic retirement from sport. They expressed a desire to have opportunities to work in fields related to their education and in which they hoped to transition to upon retiring from sport, while still maintaining their sporting career.

“
...it's hard to have a plan B when you need to put everything into Plan A.
”

“
...it does worry me but then there's another side of me that's also like well, being an elite athlete and having a profile you can, the door opens for you, compared to some others that don't have the profile that potentially I do.
”

Theme 2: KNOWLEDGE of Other Accessible Support

Parental Leave Support

Differing views and insights were shared on this topic. Some athletes reported not being aware of parental leave supports through their sporting organisations and did not believe that women in their sport could have an athletic career and be a parent. Other key comments included the view that women who have children tend to have shorter athletic careers, that parental leave supports would be very beneficial, and that having children should not be a catalyst that forces athletes to step away from high performance sport.

“
...they think they would like to retire because they know they'd like to have kids.
”

Some athletes acknowledged that parental leave support is available in their sport, and that having that support was crucial as women who had families were able to maintain their sporting careers.

“
...that that leave was really beneficial for them because they were able to keep their contract.
”



Financial Support (From Other Sources) to Cover Sport-related Expenses

Some athletes reported the need for stronger communication regarding the supports available to them.

Athlete Confidence to Discuss Employment Conditions

Athletes reported that they generally felt uncomfortable discussing finances with their sporting bodies and tended not to engage in such conversations. They reported not wanting to appear ungrateful for the support they do receive, even when they felt they deserved financial remuneration or support.

“

I think it would be a pretty stale conversation. I don't think many athletes feel comfortable [discussing finances with their sporting bodies].

”

Other Support Services That Would Benefit Athletes

Mental Health Support

Athletes expressed a desire to have access to more mental health supports noting that they experienced significant levels of stress related to being a woman athlete and that they would like to see less stigma associated with experiencing poor mental health. Many athletes reported experiencing poor mental health personally or witnessing their friends or peer athletes experiencing mental health problems. They felt this could be avoided with access to more flexible and appropriate mental health related supports. Athletes also noted that poor mental health had a negative impact of their sports performance.

“

I've seen some of my close friends go through just really tough times. And I feel like it could have been avoided if there was good mental support.

”

Financial Planning and Education

Athletes expressed a desire to have access to financial planning support and finance education. Athletes reflected that due to their schedules, supports would ideally need to be easy to access and flexible. Such support services could include, for example, online education modules that can be accessed at any time, a person from their club they can talk to, or education sessions with senior peers. Athletes suggested that improving financial wellbeing would likely benefit the mental health among athletes. However, one athlete noted they felt it was not the responsibility of the sporting bodies to ensure that athletes were financially literate.

“

I think just providing I guess, knowledge and, and teaching how to manage money, that would be huge.

”

Specialised Support People

There was a desire to have access to specialist sports related services, such as sports psychologists as opposed to clinical psychologists. One athlete expressed a desire for connection with other more senior athletes who could provide them with advice and guidance. Another athlete reflected that they found it very helpful to receive support from their sporting body in advocating for them as a student athlete.

Health and Wellbeing Provisions

Athletes expressed a desire for a greater range of wellbeing services or the ability to access wellbeing provisions more readily.

“

...we've got massage therapists at the club, but they're only there for certain hours so whether you give us an allowance, which we can then spend on that in our own time when it suits us maybe.

”

Theme 3: SATISFACTION of Own Financial Circumstances

Gender Pay Gap

Athletes reflected that successful men athletes had more financial stability. It was also reported that for some sports, there were more men athletes and therefore more competition to reach elite levels, however that the gender pay gap inhibited women's ability to engage in and excel at sport.

“

Like they [women athletes] can't afford to just quit their job and do [their sport] as a full time thing. And then people go, Oh, they're not as good and it's like, Well, really, they're never going to be as good if they're not training, [don't have the] ability to train and, that's something that gets me angry.

”

Theme 4: Financial SUPPORT From Family

Engaged Family Support/Assistance on Financial Matters

Athletes commonly reported receiving financial support for their families in terms of living at home, helping cover sport-related medical costs, paying for their sport and competition-related costs.

“

...because it is so much effort to become the elite athlete and really, that's what people are trying to achieve...I think a lot of people won't be able to achieve that without either the 'bank of mum and dad' or other supports somehow else.

”

Feelings About Being Supported Financially

Athletes reported feeling grateful for the financial support they received from their families but also guilt and pressure to perform. Athletes reported feeling glad when they reached a point of financial security where they were able to self-fund, and their parents no longer had to fund their sports related costs. They also reported that knowing their parents would support them financially if they required support provided them with a sense of comfort and reduced stress.

“

...it is just a terrible feeling asking your parents for money. I just didn't, I just didn't want to do it but I needed to. Otherwise I wouldn't have been able to get food on the table, or I wouldn't have been able to play sport.

”



GENERAL DISCUSSION

Summary and Implications of Findings

In bringing together the survey and interview findings, the quantitative and qualitative methods complement the strengths and compensate for the weaknesses of each approach and provide a meaningful context to the experiences of athletes who participated in this study. The overall summary presented here integrates the survey findings within the main themes identified from the interviews.

Factors Contributing to Poor Wellbeing

Financial stress, a lack of safety and exposure to violence within the sporting environment, and athlete-related psychological strain all contribute to poor mental health and wellbeing (see Figure 2).

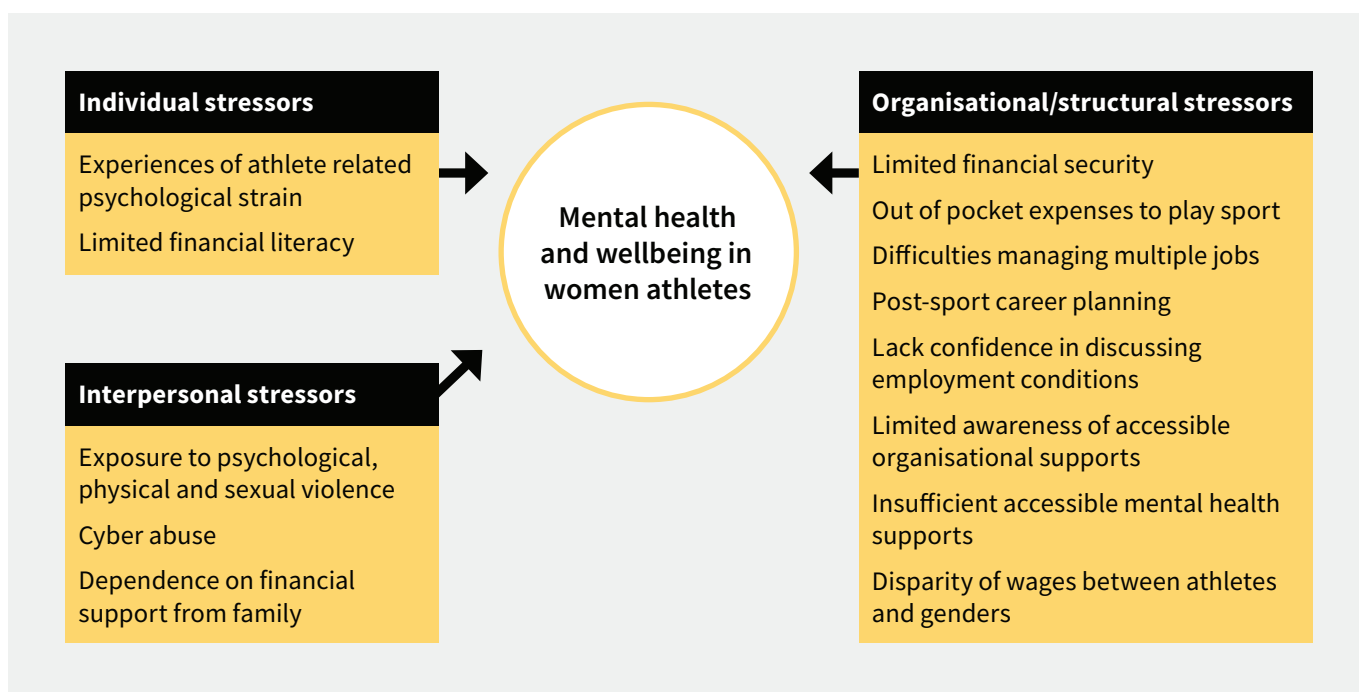


Figure 2: The Individual, interpersonal and organisational/structural stressors that impact mental health and wellbeing in athletes.

This image should be interpreted within the context of gender inequities that exist more broadly across society.

Factors Contributing to Positive Wellbeing

Athletes reported strategies that helped them to maintain wellbeing including exercising outside of training and competing as a form stress management, engaging in enjoyable activities outside of sport, creating and maintaining boundaries around their sporting lives.

Conclusion

The broader survey findings and the in-depth exploration of the lived experiences of athletes has increased the understanding about the specific challenges and the potential strategies to maximise wellbeing. This knowledge can be used to develop, modify, tailor and implement education and wellbeing programs for athletes.

RECOMMENDATIONS

The recommendations below are based on the key findings of the survey and interview outcomes of the current status of wellbeing among women athletes from AFLW, rowing and golf. They are however, not to be interpreted as a critique of the existing support and resources currently available, or not available, to athletes from these sports.



1

A Range of Women Athlete Specific Support

We recommend to increase access to more flexible, tailored and appropriate mental health supports to address the stress related to being a woman athlete and reduction of stigma associated with experiencing mental health concerns. Formal and informal supports are important for positive wellbeing. Access to (sports) psychology, financial planning, career development and mentoring from those with a shared understanding are indicated as key components of support. Providing access to mental health awareness training and supports that are co-designed with athletes should be considered.

2

Mental Wellbeing Assessment and Monitoring

Given the rates of depression and anxiety symptoms, athlete-related psychological distress and psychological distress, the length of provision of support needs should be considered, including regular monitoring and clear pathways for accessing a range of supports. A general mental health and wellbeing assessment could assist in identifying an athlete's specific needs.

3

Safeguarding From Violence and Financial Insecurity

Predictors of current athletes' psychological distress and psychological wellbeing are modifiable and addressing these by providing specific programs should be considered. These include addressing issues of safety from psychological, physical and sexual abuse within the sporting environment, enhancing mental health support and financial supports. Consider allowing athletes to self-identify a trusted family member or partner to be involved in the programs. Given the reported rates of exposure to violence in their sporting careers, a more detailed examination of the national prevalence rates, consequences and reporting of violence in sports should be conducted.

4

Financial Education

Financial concerns are common among athletes and athletes self-identified low financial literacy. The inclusion of financial literacy and financial planning education programs would benefit athletes. Consider including family and partners in financial planning.

5

Transition and Post-athletic Career Support

Athletes find it challenging to focus on post-sport career planning or advancing their careers outside of sport. A tailored post-career planning and support framework needs to be accessible, acceptable and appropriate. Retirement preparation should be grounded in a holistic approach that commences early in the athlete's career and focuses on building multiple domains of self via formal education, training opportunities and post-retirement career planning, and where possible, engagement with retired athletes with lived experience of career transition challenges and triumphs. Development of education and employment goals and tracking progress against these should be considered throughout the athlete's career. An early, clear view of retirement is recommended to minimise difficulties with transitioning out of competitive sport.

6

Organisational Safety and Support

Athletes reported a lack of awareness of organisational supports available to them and a lack of confidence in discussing their contractual conditions. Creating a safe environment to discuss contract/employment conditions and consistent communication of policies, procedures and supports available to athletes is recommended, including those related to out-of-pocket costs and career progression pathways.

LATEST RESEARCH

Gender-specific Psychosocial Stressors Influencing Mental Health Among Women Elite and Semielite Athletes: A Narrative Review

Michaela Pascoe, Aurélie Pankowiak, Mary Woessner, Camilla L Brockett, Clare Hanlon, Ramón Spaaij, Sam Robertson, Fiona McLachlan, Alexandra Parker

Elite and semi-elite athletes commonly experience mental health concerns and disorders. Compared to men athletes, women athletes are at greater risk of a range of psychological stressors that contribute to health concerns and mental health disorders, which can impact their career satisfaction and longevity. In order to address and improve the mental health of women athletes, it is necessary to simultaneously tackle the gender specific psychosocial stressors that contribute to mental health outcomes. This narrative review examines the gender specific stressors that affect mental health and wellbeing in women athletes, some of which are modifiable. Psychosocial stressors identified include exposure to violence, be it psychological, physical or sexual in nature, which can result in a myriad of acute and long-lasting symptoms; and inequities as reflected in pay disparities, under-representation in the media, fewer opportunities in leadership positions, and implications associated with family planning and motherhood. Strategies to promote mental health in women athletes should be considered, and where possible, should proactively address gender specific stressors likely to influence mental health in order to maximise positive outcomes in women athletes

What is already known on this topic

- ◆ Athletes commonly experience mental health concerns and disorders.
- ◆ Women athletes are at greater risk of a range of psychological stressors that contribute to health concerns and disorders.
- ◆ Sports should address gender inequalities including pay disparities and under representation in leadership positions.
- ◆ The inequality that women athletes experience results from individual, interpersonal, organisational and social processes.

What this study adds

- ◆ It is necessary to tackle the gender-specific psychosocial stressors that contribute to mental health outcomes.
- ◆ Women athletes experience many psychological stressors, including motherhood/caretaker responsibilities, sexual abuse, media sexualisation, a lack of representation and coverage in media, disparity in wages, the possibility of sex verification procedures and access to fewer opportunities in leadership positions. While these have been previously reported, this review demonstrates the scope, intersectionality and diversity of the stressors experienced by women athletes.
- ◆ There is a paucity of research examining athlete experiences during transition/retirement from elite sport; future research should explore the mental health of women athletes in life after sport.
- ◆ Women athletes are not supported enough with regards to family planning and motherhood.
- ◆ Sports governing bodies should consider strategies to promote mental health in women athletes.

How this study might affect research, practice or policy

- ◆ Policies and practices to promote mental health in women athletes populations should consider the myriad of psychosocial stressors that impact athlete wellbeing including at the individual, interpersonal, organisational, sociocultural environmental systems levels.
- ◆ Policies should aim to address gender-specific stressors likely to influence mental health, including exposure to violence, inequality and motherhood, in order to maximise outcomes.

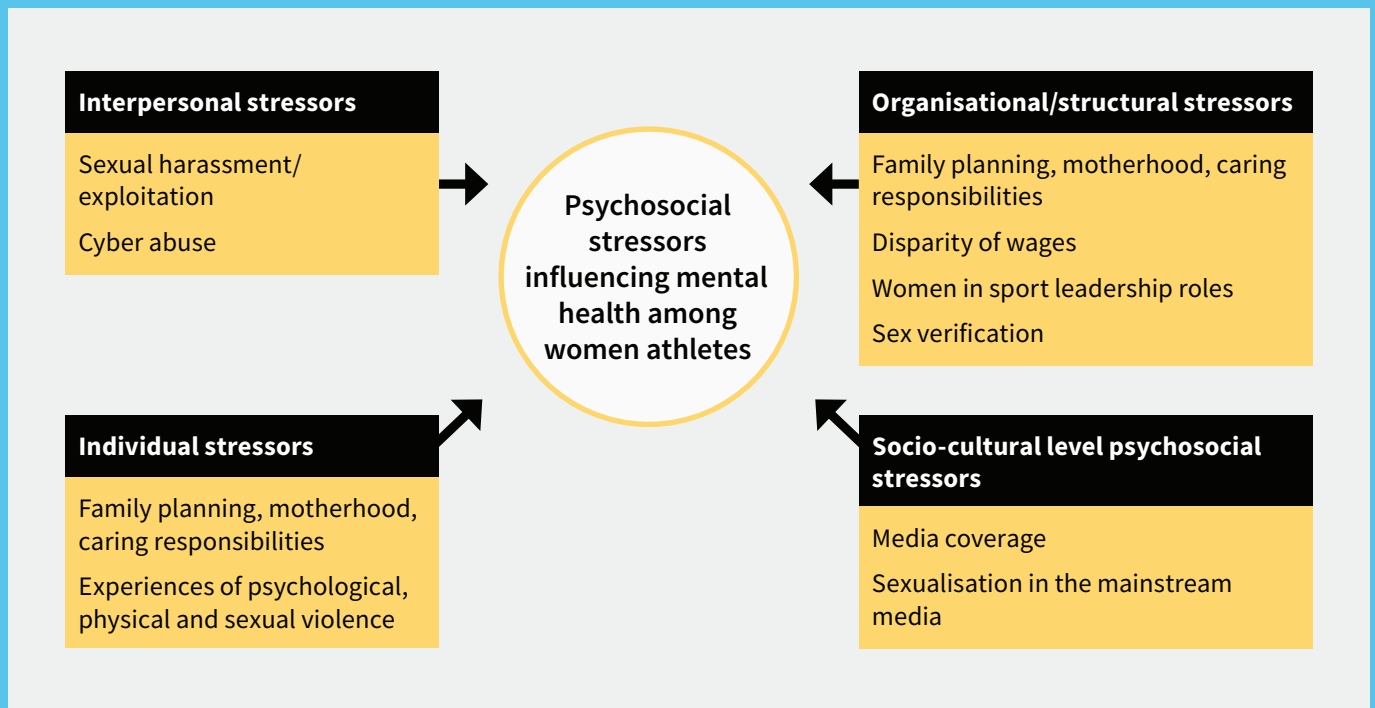


Figure 3 – Psychosocial stressors that affect women athletes’ mental health and well-being

Scientific article reference: Pascoe, M., Pankowiak, A., Woessner, M., Brockett, C. L., Hanlon, C., Spaaij, R., . . . Parker, A. (2022). Gender-specific psychosocial stressors influencing mental health among women elite and semielite athletes: a narrative review. *British journal of sports medicine*, bjsports-2022-105540. doi:10.1136/bjsports-2022-105540



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Research team, Institute for Health and Sport (IHES), Victoria University:

Professor Alex Parker is the Executive Director, Institute for Health & Sport and a professor of Physical Activity and Mental Health in the Institute, one of two flagship research institutes at Victoria University and is a registered clinical psychologist. Alex leads a multidisciplinary research group that aims to measure, understand, and promote physical activity to optimise mental wellbeing and prevent and treat mental illness. Her major research interests are investigating the effectiveness of physical activity, behavioural and lifestyle interventions for the prevention and treatment of mental disorders; translating research findings into practice through workforce development and implementation studies; and the mental health and wellbeing of elite athletes.

Associate Professor Camilla Brockett is the Deputy Leader of the Sport Performance and Business research program within IHES. She oversees industry and community-driven research collaborations that provide a holistic, interdisciplinary approach to improving sport engagement, performance and the mental health and wellbeing of sport participants. Her areas of research include - high performance sport systems and policy development, athlete development pathways, and sport for inclusive and sustainable development. With expert knowledge of sport principles and practices in the Australian and international sporting systems, Camilla works with high-level professionals including national policy makers, performance directors, senior practitioners/scientists and coaches to provide research-informed solutions to improve systems for sport development and performance.

Dr Michaela Pascoe is a Senior Research Fellow in the Institute of Health and Sport, Victoria University and a member of the Physical Activity and Mental Health research group. Her research expertise are in mental health, mindfulness, physical activity, stress and science communication. She explores the impact of stress on mental health and the influence of mindfulness and physical activity/exercise on the brain and well-being including in populations of female athletes.

Dr Aurélie Pankowiak is an early career research fellow within IHES, and a member of the Physical Activity and Sports Insights (PASI) research group. Her research interests and expertise include diversity/inclusion and safeguarding children and athletes from interpersonal violence in sport. She examines how these issues are managed by sport organisational stakeholders and how they affect sport participants/athletes. Aurélie is leading several research projects examining the organisational context influencing women and girls in sport, as well as the prevalence/disclosure of abuse against children in Australian community sport clubs and against women elite athletes. She is the co-founder and member of the International Research Network on Violence and Integrity in Sport (IRNOVIS).

Dr. Mary Woessner is an early career researcher at the Institute for Health and Sport. Over the last 5 years, she has developed a program of research around the issue of violence (abuse) in sport. She co-led the largest study in Australia to date measuring the frequency of experiences of violence against children in community and is a co-founder of IRNOVIS (International Research Network On Violence and Integrity in Sport), a collaborative network which aims to develop and advance an international research agenda to study violence and integrity in sport. Her current line of research focuses on understanding, preventing and responding to instances of violence in sport, with a particular focus on youth experiences and the gendered nature of violence.

Institute for Health and Sport: The Institute for Health and Sport (IHES) is one of two Flagship Research Institutes at Victoria University. It addresses real-world problems of local, national and global relevance in both health and sport, across four multi-disciplinary research programs.

The institute has a wide scope, encompassing institutional research in exercise science, active living, chronic disease, biomedical sciences, technology, nursing, community health, psychology, public health, sport performance, sport in society, sport participation and sport business.

The achievements of the institute are reflected in Victoria University's extraordinary reputation for sport research, resulting in a world number 7 ranking for sport science education in the Shanghai University Rankings.

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