



Women and Girls in Sport, Active Recreation & Physical Activity

A Participation Review

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Purpose of this review

The purpose of this report is to provide strategic guidance for increasing participation in women and girls across the lifecourse, in sport, active recreation and physical activity. This encapsulates all-encompassing movement that is delivered through the sport and active recreation sector. Critically though, no single domain, policy or program will, in isolation, deliver sufficiently meaningful increases in participation at population level; a comprehensive, multifaceted and multisectoral approach is necessary.

This Women and Girls participation report will:

- (i) Present global, national and NSW participation profiles for women and girls in physical activity, active recreation and sport.
- (ii) Synthesise insight-driven research to understand the needs of women and girls in relation to sport, active recreation and physical activity.
- (iii) Summarise evidence on strategies that have demonstrated effectiveness, and/ or show promise for intervening with women and girls participation at a programmatic, national and international level.
- (iv) Synthesise available evidence to make recommendations for governmental departments and the sport and active recreation sector.

This Women and Girls participation report will not:


Address broad population strategies, aimed at increasing participation across sport, active recreation and physical activity, which do not specifically target women and girls. Nor will it consider policies or programs delivered outside of the sport sector, through multi-sector approaches. These broad, multi-sectoral population strategies are addressed in Reece et al, (2017); “Towards Best Practice in the promotion of Physical Activity, Sport and Active Recreation - Rapid Evidence Review”. It will also not present Ausplay data for girls aged 0-14years as this has already been reported in Reece, L., McInerney, C., Bauman, A. (2017) Participation analysis in structured sport and physical activity amongst children aged 0 – 14 years. SPRINTER group.

The review is designed to answer the following questions:

- RQ1** How are women and girls currently participating in physical activity, sport and active recreation? *(See Chapter 1)*
- RQ2** What are the unique characteristics of women and girls across the life course which influence their participation? *(See Chapter 2)*
- RQ3a** To what extent do policies targeting women and girl’s participation in physical activity, sport and active recreation exist? What are the characteristics of these global and national policies? *(See Chapter 3a and Table 7)*

RQ3b What are the ‘best buys’ to increase women and girl’s participation in sport and active recreation? Since 2013, what emerging, innovative approaches show promise to increase women and girl’s participation and get them moving for life? (*See Chapter 3b, Appendix 1 and Appendix 2*).

Options for reading this report

- This is a sizeable document and it is unrealistic to expect all stakeholders to undertake the task of reading the whole review.
- To make the report easier to digest, large tables have been included as appendices. These form a critical part of the research review and it is recommended that these are prioritised along with the chapter narratives.
- If you see this symbol  against a program or product, it indicates the application of a behaviour change theory in the design and delivery – a critical component of applying research into practice.
- With the intention of making it easier for the reader to find the information most important to them , we propose the following:
 - If you just want the headlines and strategic recommendations, read the executive summary.
 - If you are a policy maker interested in how the collation of the evidence base can help you apply a female lens in your strategic thinking, read chapter 3a and table 7.
 - If you are a delivery partner or practitioner interested in how to tailor your products and programs to the needs of women and girls, read chapter 2.
 - If you are an academic, or have time, read everything in the order with which they are presented to you including the tables and appendices.

Who should read this report?

The findings of this review are expected to inform evidence based strategies to increase women and girls participation in sport, active recreation and physical activity which will be applied across the NSW Office of Sport, informing ongoing policy dialogues with NSW Government departments and external agencies. The findings may also be of wider interest to other stakeholders in the health, sport and active recreation sectors.

Executive Summary

Globally, there is often a gender bias in sport, active recreation and physical activity participation rates. Females tend to participate less than their male counterparts. The lack of a consistent definition for participation and variations in the surveillance systems adopted by countries to measure participation, presents significant challenges in understanding global participation rates for women and girls in sport and active recreation.

AusPlay, the national population participation tracking system for the sport and active recreation sector in Australia, reports that 73% of girls aged 0 – 14 years participate at least once a year in organised sport and active recreation outside of school hours, dropping to 21% for those who regularly participate three times a week. Data from AusPlay also suggest that activity preferences vary between genders with girls more likely to participate in active recreation – a consistent finding that holds true when girls mature.

Women and girls' decisions to engage and participate in sport, active recreation and physical activity is heavily influenced by a complex value system which fluctuates according to age and the life stage of the individual. An application of the socio-ecological model is an explicit, evidence-based approach that not only recognises the complex web of factors affecting participation, it critically provides a framework with which to design and implement strategy that considers the bigger picture, imaginative context.

While competing demands for time and financial resources are frequently cited as barriers for engagement, emotive response to the sporting experience and the fear of judgement are important determinants of women and girls behaviour. Women and girls are motivated by the fun, enjoyment and social aspects of physical activities, thus it is fundamental that these aspects are vibrant and valued in the development of communication, marketing strategies along with program design that collectively aim to influence behaviour change amongst women and girls.

International programs designed specifically to increase women and girl's participation show promise. However, very few large scale, real world evaluation of interventions have demonstrated effect and sustained influences on women and girls sport participation. That said, programs which clearly document their use of behavioural change theory and the relationship between the theory and their intervention often improve participation amongst women and girls. It is without doubt that the implementation of mass media campaigns targeting women and girls in sport has gained significant momentum in recent years. The importance of embedding a robust evaluation framework is strongly reinforced here. Whilst interim findings from campaigns such as This Girl Can, highlight their ability to raise awareness, it is too early to comment on actual population behaviour change.

Recommendations for Office of Sport NSW Government (Women in Sport Strategy)

- Develop a clear definition for participation in sport, active recreation and physical activity.
- Adopt a woman and girl's participation target with a clear, accountable measurement tool assigned. This could include; NSW AusPlay for sport participation and the NSW population health survey for health enhancing physical activity.
- No one size fits all approach. Creative, imaginative and insight driven approaches are needed. Invest in gathering local (NSW) insights for women and girls across the life course to inform the women in sport strategy.
- AusPlay data shows women and girls from disadvantaged areas participate consistently less than those in least disadvantaged areas. This strategy should focus on reducing this equity gap.
- The visibility of women in sport must be enhanced to inspire young girls and to normalise participation for adults.
- Develop an evaluation framework that monitors the broad outcomes (physical, social, emotional, economic) associated with participation.
- Participation strategies must consider age as well as life events, as barriers to participation in women and girls are influenced by personal, social and emotional factors.
- Advocate for a funding stream to pilot the delivery of innovative interventions to increase participation of women and girls, which utilises a robust evaluation framework.
- Promote the fun and enjoyable components of participation to women and girls of all ages across all pillars of the women in sport strategy.
- On a program level, adopt a person centred approach throughout the development, implementation and evaluation process.
- There is a lack of available evidence on a policy and program level to justify focusing on a specific age-group to increase women and girls participation – a life course approach which is recommended.

Recommended citation

Reece, LJ., Foley, BC., McInerney, C., Bellew, B., Bauman, AE. *Towards Best Practice in the promotion of Physical Activity, Sport and Active Recreation - Women and Girls Participation Edition*. SPRINTER Group, 2017. The University of Sydney.

The NSW Office of Sport commissioned the, Sport and Active Recreation Intervention and Epidemiology Research (SPRINTER) Group, University of Sydney, to undertake this evidence review as an independent study and to prepare this report.

Acknowledgments

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Our pragmatic approach

A comprehensive search strategy was adopted to capture peer-reviewed literature, policy documents and grey literature relevant for this review. The search was undertaken during January 25th - February 28th 2018.

Databases (SPORTSdicus and Medline) were searched using terms consistent with the US National Library Medical Subject Headings (MeSH®) Thesaurus (with modifications as required for specific databases). For grey literature, searches were undertaken using selected key words within the advanced search functions of Google / Google Scholar; the search was limited to a maximum of the first 200 results, in keeping with guidance. Additional grey literature were obtained from organisations and professionals working in the field through email invitation for submission of relevant initiatives.

Eligibility criteria

- Study type:** meta-analyses and systematic reviews of randomised trials or of longitudinal studies [second order study type: other Reviews, relevant 'value-adding' later RCTs/longitudinal studies]
- Publication date:** published in English since January 2008
- Population of interest: Women and girls across whole of life course**
 - Children aged 0-4; aged 5-12
 - Adolescents aged 13-18
 - Parents
 - Adults aged 18-64 [where possible and appropriate, separately for 18-39, 40-64]
 - Retirees aged 65+
- Reviewed research study aims:** to be included studies needed to report/ assess evidence of effectiveness (i.e. evaluation of intervention/programmatic impacts and outcomes).
- Impacts and outcomes:** to be included studies needed to report
 - Objectively or subjectively measured physical activity. Physical activity-related outcomes could include intensity levels, duration of physical activity, frequency of physical activity or sedentary behaviour (e.g. screen time), or related knowledge in these.
 - Objectively or subjectively measured participation in physical activity, sport and active recreation.

1 How active are women and girls in sport and active recreation?

The sport and active recreation sector has been recognised as a critical setting for promoting health enhancing physical activity across the general population (1). Despite numerous benefits associated with sports participation, namely physical, social and mental health - rates and patterns of participation fluctuate throughout the life course (2). Furthermore, globally there is often a gender bias in sport, active recreation and physical activity participation rates, with females participating less than their male counterparts (2). A robust understanding of women and girls sport, active recreation and physical activity participation is needed in order to inform evidence based strategies to increase population participation. This chapter will, therefore, explore the trends of sport participation for women and girls across the lifespan globally concluding with a summary of how understanding such trends can inform sport policy and practice here in NSW, as well as making recommendations for the sport and active recreation sector as a whole.

The purpose of this chapter is to provide an evidence based answer to the following question: How active are women and girls in NSW, Australia and globally.

Measuring Participation

A strength of this review is the synthesis of international evidence for women and girls participation in sport and active recreation. In spite of this intention, international comparisons for participation data must be interpreted with caution in light of variations in the definitions of sport and participation classifications across countries. Not only does this inconsistency in the language and terminology used to define participation in sport, active recreation and physical activity influence the ability to assess progress, it has significant implications when attempting to unite government departments towards a common target. Primarily, when health are the driver of cross-sector strategy to increase participation, physical activity is used as the metric. Whilst in contrast, if the sport and active recreation sector are leading, participation in organised physical activities are used. A shared narrative is critical for establishing cross-sector engagement but also for measuring and communicating progress. There is very little evidence, other than in the UK, where the same definition is used across policy documentation, presenting an opportunity for the NSW government and Australia. For the purposes of this review, the definition of sport adopted aligns with the Australian Sports Commission and the Australian Bureau of statistics (2008) definition of viewing it as a form of physical activity, which involves rules elements

A universal definition for participation and an alignment of participation based outcomes would enhance understanding of participation rates and strengthen collaboration within and across sectors.

of competition, physical exertion and skill. Participation throughout this review is defined as playing a sport or physically undertaking a given physical activity.

From the perspective of individual sporting organisations, they often demonstrate participation rates through memberships and outputs, with funding aligned with this or targets attributed to participation growth. Outcomes including the physical, emotional, social, economic benefits of sports participation are not always clear nor routinely collected by the sport and active recreation sector. The agreement and alignment of key outcome measures would not only strengthen the argument for the value of sport and its impact on the health and wealth of individuals and communities, but present a unique opportunity for collaboration across the sport and active recreation sector.

Historically, research into participation in sport and active recreation has relied on quantitative methods, predominantly questionnaires which provide a cross-sectional snapshot of physical activities at a given time. While the multiple, different questionnaires which have been applied within and across countries present methodological challenges additionally, very few questionnaires have been applied longitudinally. This limits the ability of the evidence to demonstrate potential changes in sport and active recreation participation behaviours over time (3).

Acknowledging the challenges faced by the sport and active recreation sector in measuring participation, the remainder of this chapter will attempt to provide a global overview of women and girls participation rates and an in depth analysis of Australian participation data. The aim of this chapter is to provide a starting point to inform the development of a women in sport strategy for which to measure progress.

International snapshot of women and girls participation

A systematic review by Hallal et al., has shown that overall adult's physical activity, including sports participation, has increased in the past 20-30 years in five high income countries; these results were not broken down by gender (4). Complementary to this review, a range of physical activities, including sport and active recreation, across the different regions of Africa, Americas, Eastern Mediterranean Europe and Western pacific were assessed and found low female participation was a consistent trend, evidenced in Europe, with France, Latvia, Slovakia, Greece, Belgium, and the United Kingdom (5). In contrast, women's participation was actually greater than men's in Sweden, Finland and Denmark (5).

In Europe, the Eurobarometer survey led by the European commission from 2014, found the difference between women and men was most prevalent in the younger age groups, with 74% of men aged 15–24 exercising or playing sport at least once a week, compared with 55% of women in the same age group. The gender gap narrows for older age groups, with men exercising or playing sport slightly more than women in the 40–54 years and 55+ age groups. The same pattern applies when it comes to regular physical activity (defined as an accumulation of 30 minutes or more of moderate exercise performed on at least 5 days each

week): the gap between women and men is significant in the youngest age group (15% compared with 8%), but then narrows in the older age groups (6).

In Canada, the General Social Survey (GSS) includes questions on participation in organised sport among adults (15+ year olds), and shows a decline in the participation of organised sport from 45% in 1992 to 26% in 2010 (7). In the United Kingdom (UK), the Active lives population survey (2015-16), found women were more inactive than men (27% of women participated in less than 30 minutes per week compared to 24% men) with 54% of women meeting the 150 active minutes of moderate intensity guidelines per week (8). The proportion of women who are active globally is also influenced by cultural and ethnic backgrounds. UK data shows whilst women from black and south Asian have the lowest physical activity levels overall, the gender gap is also at its greatest among these groups (9).

In **New Zealand,**

With the severe lack of longitudinal data available to demonstrate trends in participation and challenges of measuring gradual shifts in participation behaviour at the population level, some jurisdictions are collecting correlated interim behavioural measures known to be related to participation in sport, active recreation and physical activity. Emerging data on the broader physical, emotional, social, economic benefits of sport, active recreation and physical activity interventions, are likely to strengthen the developing case for significant investment in sport and active recreation for public health.

In spite of the challenges with making international comparisons for sport related participation rates, collectively the evidence does provide a powerful message – more work is needed to support more women and girls to participate in sport, active recreation and physical activity.

Gender often affects participation in sport, active recreation and physical activity globally yet, an accurate global participation profile for female participation remains a challenge due to methodological reasons.

Australian snapshot of women and girls participation

Over the past 18 years, many government initiatives have taken different approaches to monitoring participation as an indicator of sport and active recreation sector performance. Attempts to measure physical activity participation in children and adolescents, in Australia is fraught with challenges. Pedisic et al, (2017) illustrates this well with the identification of 21 population surveys from 2004 – 2015 with Australian national and state level children. To surmise, the prevalence estimates across all surveys tended to be: [i] higher among children when compared with adolescents; [ii] higher for boys than for girls when assessed using self-reports; and [iii] higher for girls than for boys when assessed using pedometers. The true prevalence of compliance with physical activity guidelines among children and adolescents in Australia seems to be difficult to determine (10). Measurement of sport, active recreation and physical activity remains a challenge in Australia.

AusPlay is the national population participation tracking system for the sport and active recreation sector, funded and led by the Australian Sport Commission (ASC), as part of the Play.Sport.Australia participation strategy. The Ausplay questionnaire evolved from previous instruments used in the Exercise, Recreation and Sport Survey (ERASS) and the subsequent Australian Bureau of Statistics (ABS) Multi-Purpose Household Survey, Participation in Sport and Physical Recreation module. AusPlay data is collected through computer assisted telephone interviewing (CATI); it commenced in October 2015 and remains in operation at the time of this publication.

In AusPlay, participation is defined as at least one session of organised sport or active recreation in the previous 12 months. This amount of participation represents a small fraction of overall physical activity. Estimates of regular participation in sport, active recreation and physical activity are required to assess health-enhancing levels of activity. This is challenging to understand in only one survey (Ausplay) that only asks about organised activities, and not about incidental activity and active travel.

The annual target sample size for AusPlay is 20,000 adults aged 15 years and over, and approximately 3,600 children aged 0-14, spread evenly across the year. However, the sampling and recruitment of survey participants has not achieved the same size target since commencement. Furthermore, although the complex sampling technique is designed to collect a sample which represents the population, the sample so far has had a skewed distribution, favouring the least disadvantaged, young children (0-5 year olds) and older populations. To improve estimates of population participation, analysis methods such as applying survey weights can be used.

Overall, as a results of the small sample size, annual definition of participation and skewed data, the AusPlay data should be interpreted with caution.

Participation in organised sport and active recreation (AusPlay)

Nationally, AusPlay has shown that 73% of girls aged 0 -14 years participate at least once a year in organised sport and active recreation outside of school hours; this drops for regular participation to 21% of girls who reported participating three times a week. In adults aged 15 years and over, women are more likely to participate in gym/fitness related activities and walking than in organised sport. Evidence suggests that whilst Australian women and girls are just as active (frequency) as men and boys, girls are more likely to accumulate their activity through recreational or organised active recreation – a finding which remain true when girls mature into adulthood. Contrasty, men and boys participate in more organised sports.

When women and girls are participating in physical activities, they do however tend to complete shorter sessions which are less intense than men, meaning the physical activity is having a smaller impact on improving their health (11). Around one-quarter (24%) of future disease burden due to physical inactivity could potentially be avoided if women added a 15-minute brisk walk, 5 days each week to their current activity levels (12). Likewise, increasing the intensity of the activities women are participating in, when they are active, will positively impact their health.



Figure 1 AusPlay focus: Women and Girls Participation. Australian Sports Commission, 2017.

The benefits of participation in organised sport and active recreation for women and girls are multi-sectoral and produce broader health and wellbeing benefits beyond participation. In Australia, the longitudinal relationship between women and girls sport and active recreation participation and the outcomes on social, emotional and physical health have not been robustly investigated.

Measurement from different Australian sectors

Adults

The Australian National Health Survey, implemented by the Australian Bureau of Statistics, is the population surveillance survey which measures adults' health enhancing physical activity levels according to the recommended guidelines. In 2014-15, the Australian Institute of Health and Welfare and Australian Bureau of Statistics reported that 46% of women aged 18–64 were meeting physical activity recommendations. Physical activity rates were highest among women aged 25–34 (51%) and lowest among women aged 55–64 (41%). 1 in 4 (23%) women aged 65 and over were sufficiently active.

NSW Health further collect self-reported population health data through a CATI from adults aged 16 years and over in the NSW Population Health Survey. This shows that in 2016, 46.5% of women were undertaking no moderate intensity physical activity or less than 150 minutes of moderate intensity physical activity per week or the moderate intensity physical activity was undertaken over fewer than 5 separate occasions per week. NSW Health Stats shows the proportion of insufficiently active adults over time in Figure 1 below. A higher proportion of women are insufficiently active consistently over time.

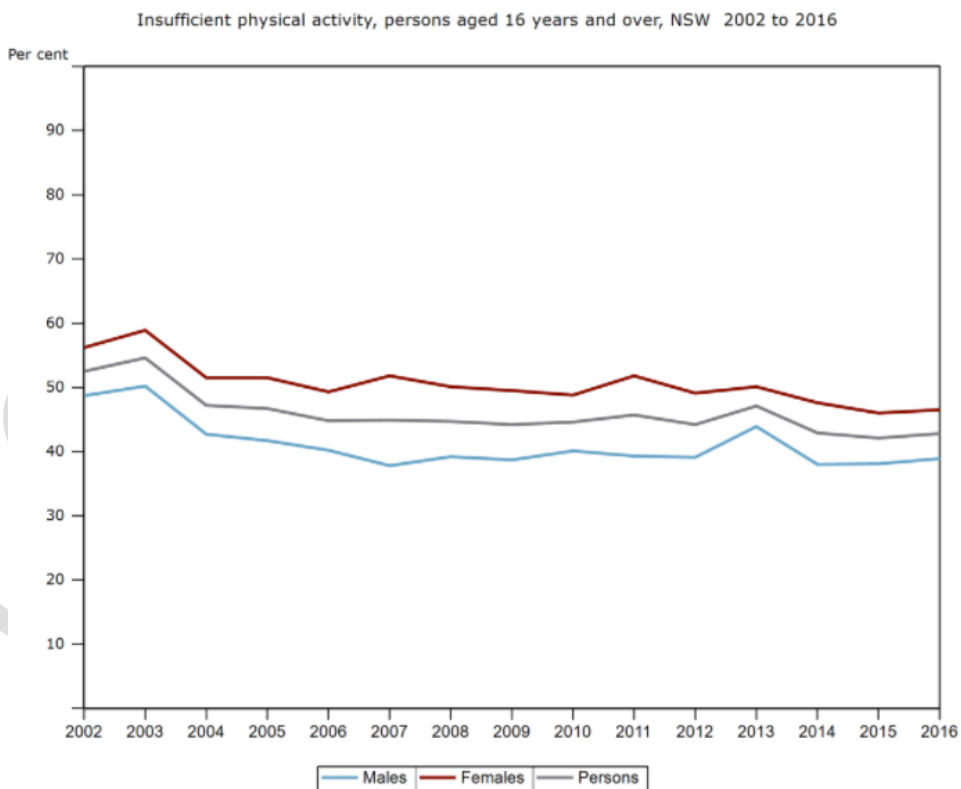


Figure 2 NSW Health Stats longitudinal trend in population inactivity

The health sector has consistently collected information on population physical activity, as globally, physical inactivity is recognised as the fourth leading risk factor for non-communicable disease.

Children and Adolescents

Robust population surveillance of children and adolescents through the School Nutrition and Physical Activity Survey (SPANS), led by the NSW Ministry of Health, has collected objective data from primary and secondary school students. Overall among children and adolescents (5-16 years old), girls (15%) were significantly less likely to meet the physical activity recommendations than boys (24%). Estimates of girls' physical activity and physical fitness from SPANS are available in Table 6.

Table 1 Prevalence of girls meeting the physical activity and physical fitness benchmarks in NSW in 2015 SPANS

INDICATOR	BENCHMARK	CHILDREN IN PRIMARY SCHOOL 2015	ADOLESCENTS IN SECONDARY SCHOOL 2015
PHYSICAL ACTIVITY PARTICIPATION	≥60mins spent in moderate to vigorous physical activity every day	23.0%	11.5%
KNOW THE PHYSICAL ACTIVITY RECOMMENDATION FOR CHILDREN AGE 5-12 YEARS	60 minutes a day	26.6%	28.3%
CARDIORESPIRATORY FITNESS (20MSRT)	Children categorised as achieving 'Health Fitness Zone' according to the age- and sex-adjusted criterion referenced standards for cardiorespiratory fitness	62.6%	58.5%
MUSCULAR FITNESS (STANDING BROAD JUMP)	Children categorise as achieving 'Health Fitness Zone' according to the age- and sex-adjusted 40th centile for muscular fitness	36.7%	35.1%

Other than AusPlay, there is lack of available national data for girls (0=14 years) participation in sport, active recreation and physical activity.

New South Wales (NSW) trends

Across NSW, sport and physical activity of the population is monitored in a similar approach to national population participation. The most relevant source of importation to consider women and girls participation in NSW is the AusPlay dataset, with a thorough analysis undertaken at a state level. As outlined earlier in this section, Ausplay data should be interpreted with caution. In a recent Ausplay report, national data on women and girls participation in sport, active recreation and physical activity was presented through a comparison to men and boys' participation. Our approach considered the holistic benefits of sport and active recreation and presents an estimated baseline, which can be used to identify priority populations of women and girls who require targeted, intervention compared to other women and girls.

Methods of NSW AusPlay analysis

AusPlay survey data collected through telephone interviews from NSW residents between 1st October 2015 to 31st December 2016 was used to gain insight into sport and physical activity participation of NSW women and girls. Information was collected directly from randomly chosen individuals aged 15 years and over and, if they were a parent or guardian, about one randomly chosen child. Data from 3,309 NSW women (aged 15 years and over) and 559 girls (aged 0-14 years) were analysed.

To obtain estimates that are more representative of the target population, survey weights¹ from the data were used. These weights were normalised to the achieved sample size in order to obtain more accurate standard errors² (SE) (see Appendix 3 for more detail). Using these weights, estimates of population participation rates were reported separately for women and girls participating at least annually, weekly and three times weekly by life stage, socio-economic status (SES) and cultural influences³. The Australian Bureau of Statistics' Index of Relative Socio-Economic Disadvantage (IRSD), Socio-Economic Indexes for Areas (SEIFA) was used as a proxy for SES. SEIFA uses a broad definition of relative socio-economic disadvantage and aids understanding of the relative level of social and economic wellbeing of a region. SEIFA is shown in quartiles 1 – 4, with 1 representing the most disadvantaged area and 4 representing the least disadvantaged area.

Throughout the report both the weighted mean and median, accompanied by the SE and interquartile range (IQR) respectively, have been reported in an attempt to display and describe the central value within the range of data collected. This is to provide a comprehensive representation of the data and to inform the reader of the distributional skew that is often present⁴. Because the data are not normally distributed, it is recommended that the median is used when only one measure is required.

To better understand the extent of participation, the average duration of a session and the average weekly duration of activity were calculated from those women and girls who do participate at least once a year. Data from this survey were also used to estimate the total annual cost of participation for each woman and girl. All estimates were weighted and calculated by life stage, SES and cultural influences.

¹ Weights are needed to reduce the bias in survey estimates. Weights are produced to make the sample match the population as closely as possible.

² SE refers to standard error which is a measure of statistical accuracy and is the standard deviation of its sampling distribution

³ Cultural influences include: identifying as an Aboriginal or Torres Strait Islander person, and/or speaking a language other than English.

⁴ The mean provides a summary of the data that considers all the information in the dataset however, when the data are not normally distributed, the mean can be misleading. The median provides a better estimate of a 'typical' value when the data are skewed or there are outliers. When the data are normally distributed the mean and median are equal.

Which women and girls in NSW are currently active?

Among the 3,868 women and girls who provided data in AusPlay, 86% women (aged 15 years and over) and 67% girls (aged 0-14 years) reported participating in organised sport, active recreation or physical activity at least once a year. The annual NSW participation rates for women and girls are higher than the national average. The gap between annual participation and regular participation indicate that during different stages of the lifecourse, organised activities appear to be trialled but not sustained among women and girls.

The proportions of women and girls who reported participating in organised sport and active recreation three times a week does not align with meeting physical activity recommendations, however both measures indicate participation is lowest in women and girls under the age of 18 years old. This may be a results of their data being reported by parents and estimates only including participation in organised sport and active recreation, outside of school hours, and not including active travel.

Regular participation rates (at least three times a week) are lowest among infants (0-5 years), this is expected to be due to their stage of development. Women and girls reported in AusPlay that their regular participation in organised activities increases throughout childhood, peaking at 66% for young adults. Although this trend in regular participation is encouraging, the low proportion of girls regularly participating in organised sport and active recreation, compared to participating once a year or once a week, is concerning.

As women and girls progress through the lifecourse, they participate in sport and physical activity more often. Overall, children had lower participation rates than adults over the age of 17.

There is little difference between the participation rates observed in women with young children and all other women aged 25 – 54 years.

When compared to women who are retired or on a pension, older women (55 years and over) who were not retired had a tendency to be participate in sport, active recreation and physical activities more often (at least three times a week), however were less likely to be meeting physical activity guidelines compared to retired women.

Table 2 Estimates of population participation rates and proportion meeting physical activity guidelines for NSW girls and women in sport or physical activity.

LIFECOURSE	N	AT LEAST ONCE/YR	AT LEAST ONCE/WK	AT LEAST 3X /WK	% MEETING GUIDELINES
INFANTS (PRE-SCHOOL)	140	40.0%	29.3%	1.4%	-
CHILDREN (PRIMARY SCHOOL)	277	84.9%	69.9%	22.9%	7.6%
EARLY TEENAGERS (SECONDARY SCHOOL ≤15)	142	73.0%	64.5%	30.7%	13.1%
ALL GIRLS (0-14 YRS)	559	67.2%	54.8%	16.9%	-
YOUNG ADULT 15-17	62	96.8%	80.4%	48.1%	28.9%
YOUNG ADULT 18-24	249	89.5%	79.8%	66.0%	72.2%
WOMEN 25-54*	643	87.6%	79.2%	59.0%	61.8%
MOTHER – CHILD <15 YEARS	663	89.7%	81.5%	60.7%	58.3%
OLDER WOMEN 55+ NOT RETIRED	560	86.8%	81.9%	63.5%	61.2%
RETIRED OR ON A PENSION	1,132	77.7%	72.3%	57.4%	65.0%
ALL WOMEN (15+)	3,309	86.2%	78.6%	60.1%	-

*Do not have a child under 15 or refused to answer

Socio-demographic influences on participation

There is strong evidence to support the influence of socio-demographic factors on physical activity, sport and active recreation participation across the life course. For the first time, this report demonstrates the association between participation and SES, Aboriginality and language spoken at home.

Socio-economic status

Across all three categorisations of women and girls participation, rates of participation are lowest in the most disadvantaged population and highest in the least disadvantaged population. The difference between the two groups is largest when observing participation rates for at least once a year; only 43% of girls and 78% of women of the most disadvantaged quartile reported participating at least once a year, compared to 81% of girls and 91% of women in the least disadvantaged quartile.

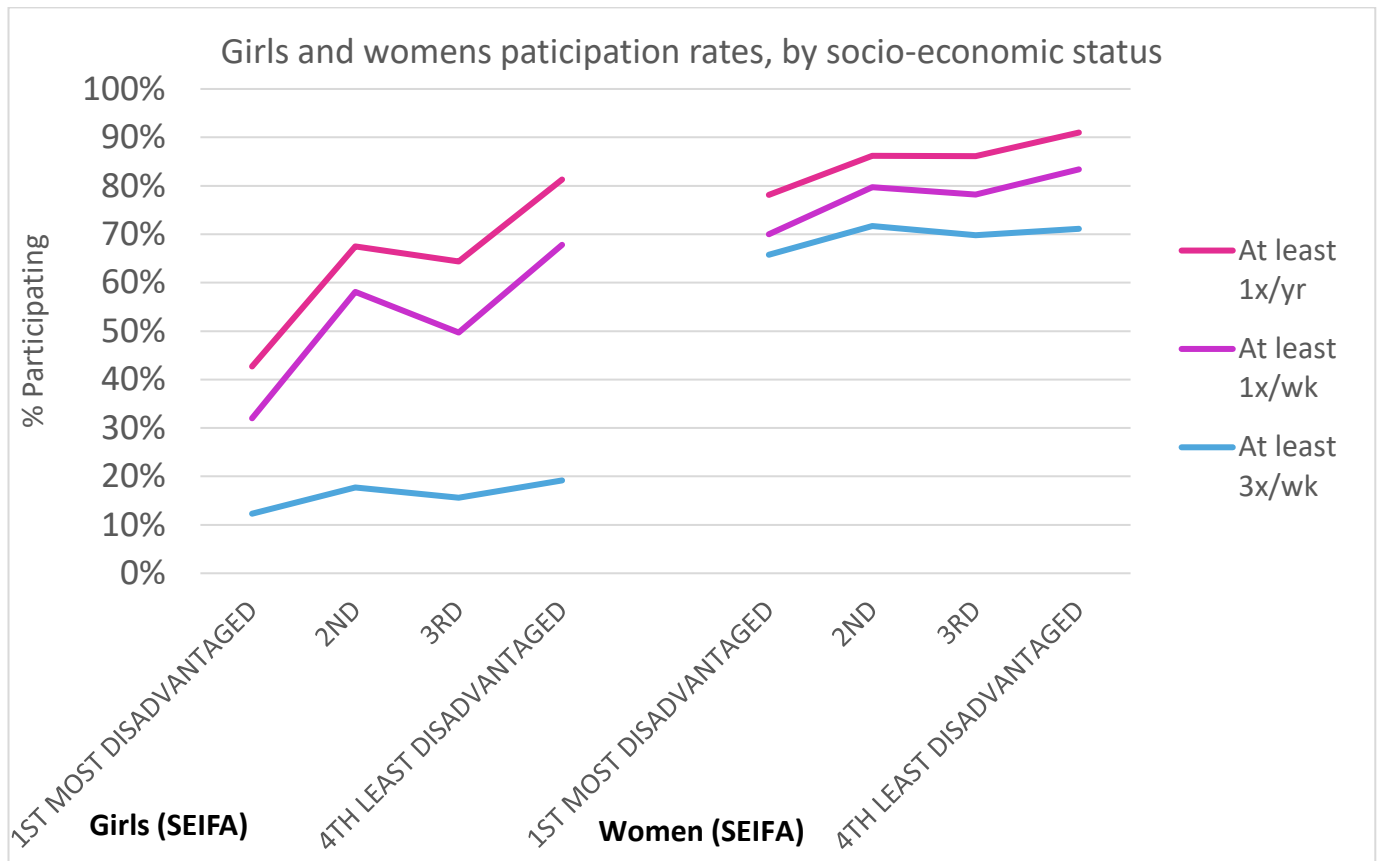
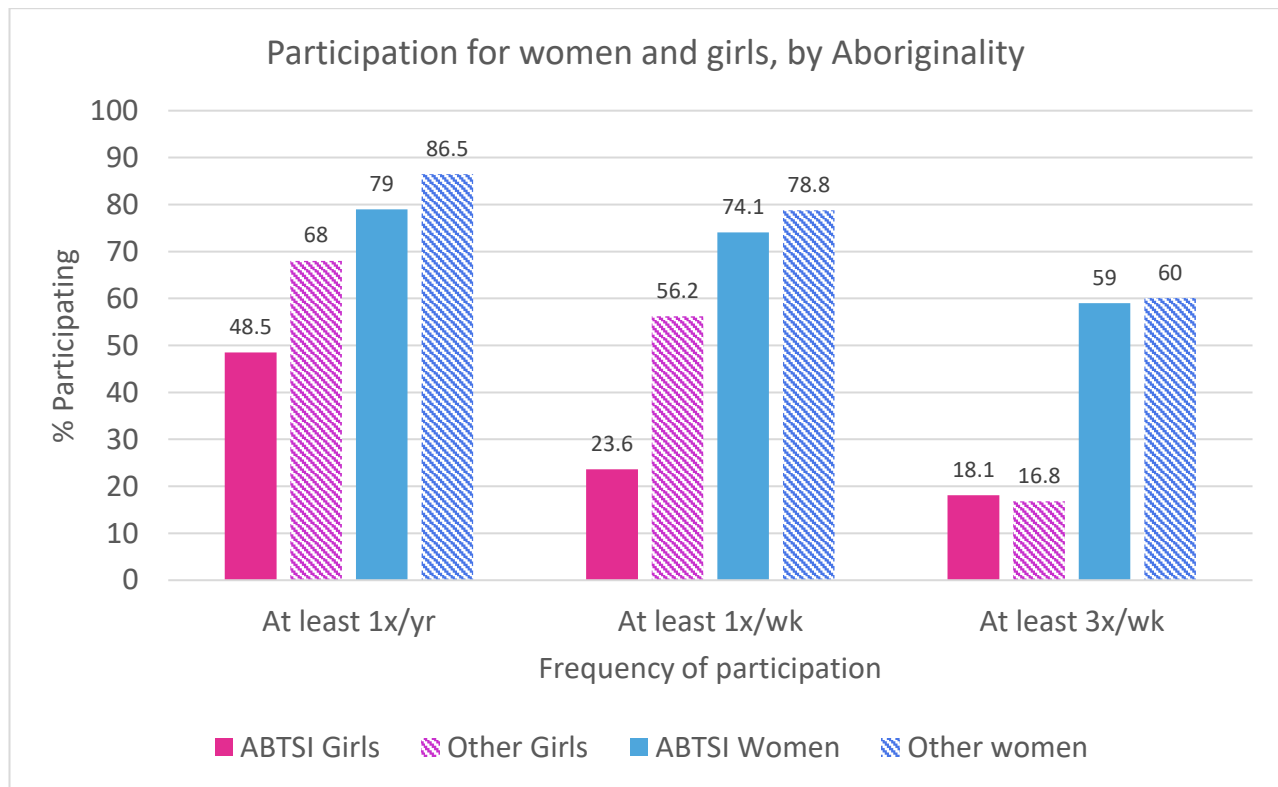


Table 3 Estimates of population participation rates for NSW girls and women in sport or physical activity by socio-economic disadvantage.

SEIFA (IRSD) QUARTILE	PARTICIPATION RATE			
	N	At least once/yr	At least once/wk	At least 3x /wk
GIRLS (0-14)				
1ST MOST DISADVANTAGED	76	42.7%	32.0%	12.3%
2ND	109	67.5%	58.1%	17.7%
3RD	153	64.4%	49.7%	15.6%
4TH LEAST DISADVANTAGED	209	81.3%	67.8%	19.2%
WOMEN (15+)				
1ST MOST DISADVANTAGED	415	78.1%	70.0%	65.8%
2ND	672	86.2%	79.7%	71.7%
3RD	677	86.1%	78.2%	69.8%
4TH LEAST DISADVANTAGED	976	91.0%	83.4%	71.1%

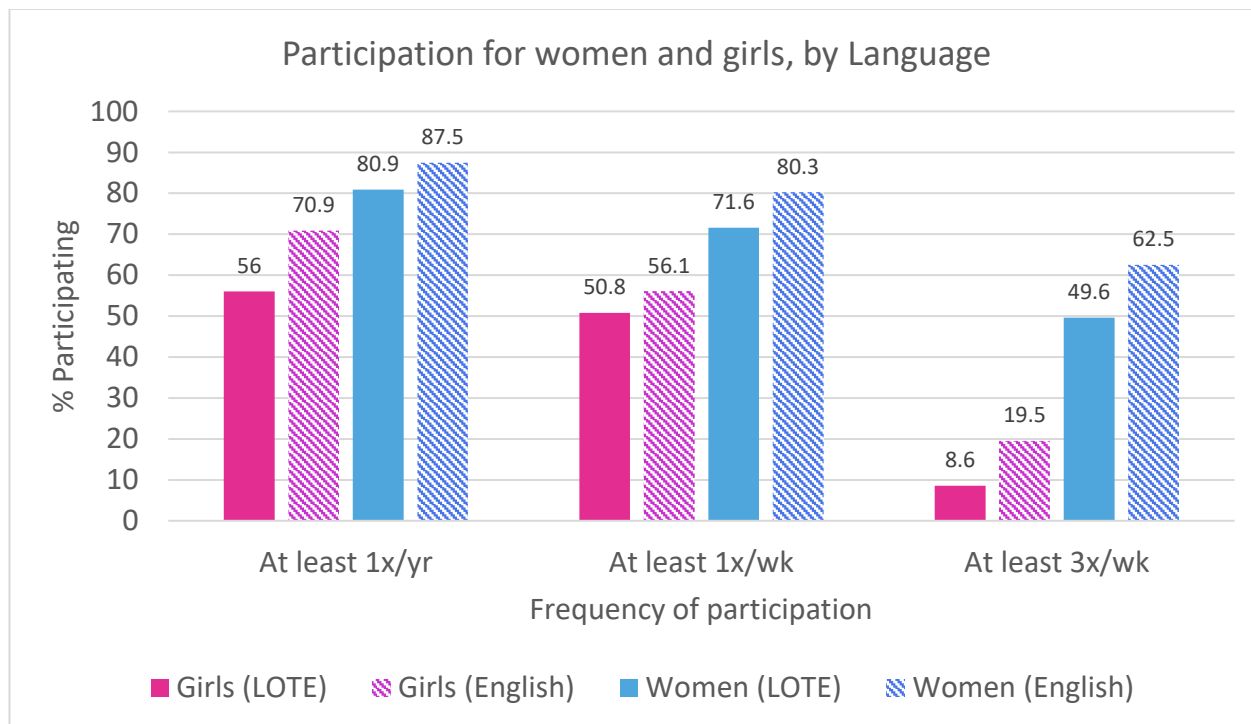
Aboriginal and/or Torres Strait Islander

In the AusPlay data set, 2.5% of women and 2.7% of girls identified as Aboriginal and/or Torres Strait Islander (n=96). These small numbers mean these results should be interpreted with caution. There was a greater proportion of Aboriginal girls (0-14 years) who were active three or more times per week, however overall, women and girls of Aboriginal and Torres Strait Islander origin achieve lower levels of participation in sport and active recreation.



Language other than English

Speaking a language other than English (LOTE) is associated with lower participation in sport and physical activity for both women and girls.



How do women and girls participate in sport and active recreation in NSW?

Weekly duration⁵

Among all participating women, the mean weekly duration of physical activity is 277 mins (SE 5.2) and median is 210 mins (IQR 100, 365). Weekly duration of activity increases during childhood and peaks among young adults (18-24 year olds). Of adult women who participate in activity, women with young children participate for the shortest duration, while retired women participate for the longest.

Further analysis of average weekly duration of activity demonstrated that there is a 30-40 minute difference in girls and women's median duration of last session respectively, between the most and least disadvantaged populations. Most disadvantaged women and girls participate for the fewest minutes per week.

⁵ Observations were omitted from analysis if last session was longer than 7 hrs

There was a difference in the average weekly duration of a session between Indigenous and Non-Indigenous women and girls. Aboriginal and Torres Strait Islander's reported participating in more minutes of activity than the non-Indigenous population (98 compared to 85 minutes for girls; 281 compared to 208 minutes for women). This information should be interpreted with caution as there was a small number of observations used to make these estimates.

Women and girls from socio-economically disadvantaged areas and CALD populations would benefit most from interventions to increase participation

Girls who reported speaking a language other than English typically achieved 60 minutes whereas girls who only spoke English gained 98 mins weekly. Women speaking a language other than English typically achieved 165 minutes while women who only spoke English gained 211 mins weekly. These differences in weekly duration for those who reported speaking a language other than English is concerning.

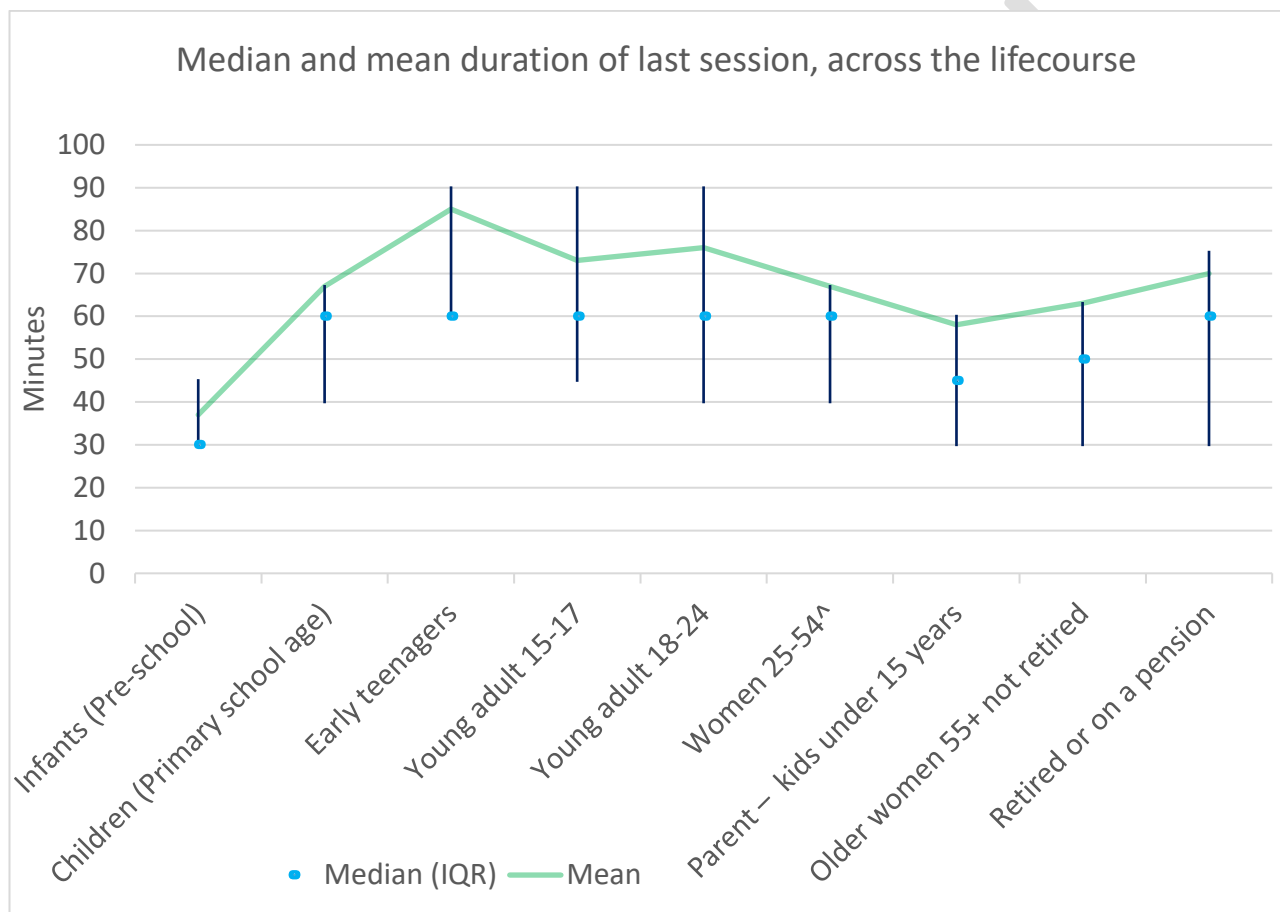
Table 4 Estimates of mean with standard error (SE) and median with interquartile range (IQR) weekly duration of sport or physical activity for NSW girls and women by lifestage.

LIFECOURSE	AVERAGE WEEKLY DURATION (MINS)				
	N	Median	Q1, Q3	Mean	SE
INFANTS (PRE-SCHOOL)	58	30	30, 60	45.5	3.5
CHILDREN (PRIMARY SCHOOL AGE)	243	102	55, 210	185.9	18.3
EARLY TEENAGERS (UNDER 15 YEARS)	110	180	90, 360	274.1	20.5
YOUNG ADULT 15-17	59	180	98, 465	317.3	45.8
YOUNG ADULT 18-24	222	246	135, 420	352.7	24.7
WOMEN 25-54[^]	569	210	90, 372	270.8	11.2
PARENT – KIDS UNDER 15 YEARS	591	180	90, 301	226.0	8.4
OLDER WOMEN 55+ NOT RETIRED	484	211	105, 361	281.1	12.6
RETIRED OR ON A PENSION	854	225	117, 421	293.9	8.9

[^]Do not have a child under 15 or refused to answer

Duration of last session⁶

Overall women the mean duration of their last session was 66 mins (SE 1) and the median was 60 mins. As anticipated, the shortest duration of last session was observed in infants with a median time of 30 minutes. Parents with children younger than 15 years had the shortest duration among all women with a median time of 45 mins. Other women between the ages of 25-54 years without children were among those with the longest duration of last session at 60 mins. On average, older women (55+) who were not retired exercised for shorter periods of time than women who were retired or on a pension.



There did not appear to be any difference in the duration of a session between women or girls of different socio-economic backgrounds or Aboriginal and Torres Strait Islander women and girls. This is likely due to the small sample size and should be interpreted with severe caution.

There was a difference in session duration for girls who reported speaking a language other than English, but not women. Girls who reported speaking a language other than English typically exercised for 45 mins whereas girls who only spoke English exercised for 60 mins at a time.

⁶ Observations were omitted from analysis if last session was longer than 7 hrs

What activities do women in NSW participate in?

Among young adults, Athletics/running, fitness/gym and walking were common activities. During younger stages of life, organised activities and team sports (Netball and Dance) still featured in their top 5 activities, however were less popular among women over 25 years of age. For all women, walking, fitness/gym and swimming are consistently the top 3 activities, including mothers of young children and retired women.

The list of activities provided in AusPlay is extensive. The popular activities in NSW are similar to what is reported in the National AusPlay focus on women and girls participation. This report highlights that women and girls are less likely to participate in sport-related activities, including team sport and club sports across the lifecourse.

Table 5 Most popular activities for women, by life stage

Popular activities for women	Overall percentage of women participating in each activity	Top 5 activities across the life course					
		Young adult 15-17	Young adult 18-24	Women 25-54	Parent-kid under 15	Older women 55+ not retired	Retired or on a pension
Walking (recreational)	52.0%		2	1	1	1	1
Fitness/gym	36.7%	2	1	2	2	2	2
Swimming	17.6%	4	5	3	3	3	3
Athletics/running	13.9%	1	3	4	4		
Yoga	7.6%			5		4	4
Cycling	7.5%				5		
Bush walking	5.6%					5	
Netball	4.8%	3	4				
Dancing (Rec)	2.9%	5					
Golf	1.9%						5

Women participated in similar activities across all quartiles of socio-economic disadvantage, except the least disadvantaged population of women (25-54 years old) who were more likely to report participating in yoga than cycling.

How much do women and girls spend on sport and active recreation?

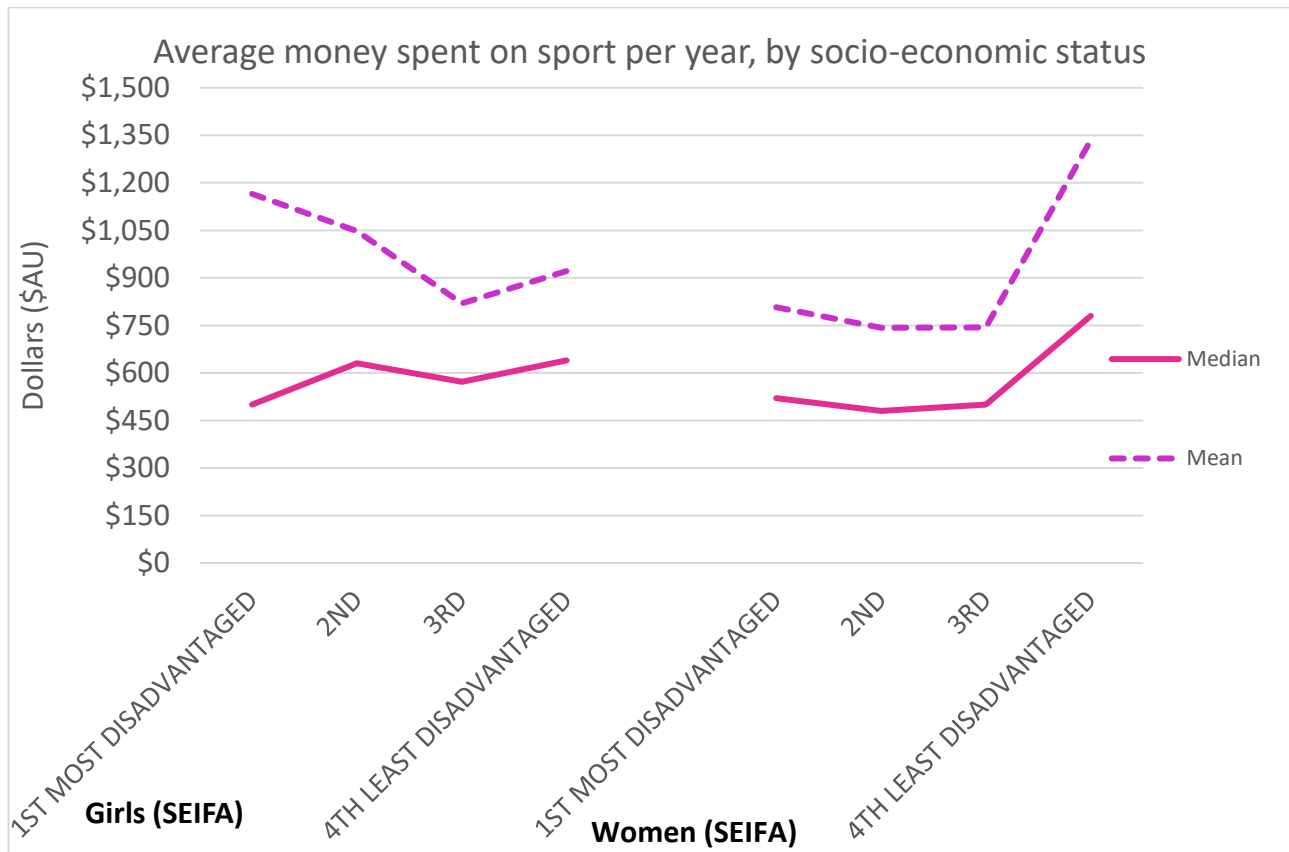
57.6% of women pay for sport. The median total annual cost of sport for all women is \$610 (IQR 203, 1,170).

Table 5 shows the average total cost of sport for women and girls.

Table 6 Estimates of mean with SE and median with IQR total annual cost of sport or physical activity for an individual girl or woman in NSW by lifestage.

LIFECOURSE	AVERAGE TOTAL ANNUAL COST (\$AU) OF SPORT				
	N	Median (\$)	Q1, Q3	Mean (\$)	SE
INFANTS (PRE-SCHOOL)	53	500	190, 774	555.7	68.2
CHILDREN (PRIMARY SCHOOL AGE)	206	750	255, 1,370	1062.1	79.9
EARLY TEENAGERS (UNDER 15 YEARS)	100	500	200, 1,280	1044.7	138.0
YOUNG ADULT 15-17	42	300	156, 800	680.8	145.3
YOUNG ADULT 18-24	159	500	200, 1,144	872.6	83.8
WOMEN 25-54^	336	700	250, 1,244	1122.3	83.4
PARENT – KIDS UNDER 15 YEARS	354	680	300, 1,350	1012.2	57.2
OLDER WOMEN 55+ NOT RETIRED	217	650	240, 1,050	1140.0	139.4
RETIRED OR ON A PENSION	347	500	150, 1,030	804.7	56.2

There was a difference in the average total spent on sport annually depending on socio-economic status, where the most disadvantaged girls had the lowest median spend but the highest mean spend. For women, the least disadvantaged women reported paying the most for their activities.



Estimates of Indigenous girls spend on sport found they were paying double what non-Indigenous girls paid for sport (\$1,200 compared to \$600). Indigenous women also reported paying far more than non-Indigenous women, with median spend of \$1,032 compared to \$600.

Those who reported speaking a language other than English spent more during childhood (\$700 annually, compared to \$600) and less during adulthood (\$600 compared to \$616) than those who only spoke English.

2 What characteristics affect participation in sport and active recreation amongst women and girls?

This chapter provides a top-level collation of existing evidence on how best to engage women and girls in sport and active recreation, with careful consideration given to the complex factors that influence participation. Critically Information from multiple sources namely academic, government and the sport and active recreation sector, have been identified to provide an holistic approach to aid understanding of how best to engage women and girls in sport. All research which recognised women and girls as a discrete population have been included.

Firstly, the chapter considers information motivations and barriers for engaging and with sport and the emotive experience of sport and active recreation on the population themselves. Subsequently, how best to encourage women and girls to become more active and the requirements of the 'sector' to enable them to maintain this engagement will be explored. Finally, a comprehensive framework of understanding women and girls engagement with sport will be provided with key recommendation made to inform a women in sport strategy.

Facilitating behaviour change in any population is not easy, there is no 'one size fits all' and engaging women and girls in sport and active recreation is no different. Whilst this chapter provides a high level synthesis of the existing evidence surrounding women and girls engagement and the factors which characterise them as a unique target audience, it is recommended that the deliverer or policy maker builds upon this, with in-depth, local work to understand the target audience of women and girls.

In the interest of brevity and to avoid duplication, broad insights across the lifecourse and general population will be considered here. The reader is directed to two significant reports from Victoria, Australia and the United Kingdom, namely Vichealth: Female participation in sport and physical activity snapshot of evidence paper and the Sport England: Go where women are insights pack, for existing, high quality insights into women and girls participation.

Understanding women and girls

A growing body of research has been conducted exploring the characteristics of women and girls, which make them different from other target audiences. Collectively, it is this information that must be considered when delivering sport and active recreation programs for women and girls. The majority of applied research in this area has been funded and delivered by Sport England, working in partnership with UK based charity, Women in Sport. Research thus far has focused on understanding how to re-design and re-position sport to engage more women and girls, with the intention of enhancing overall physical activity levels.

A core component of this work was the creation of the complex value system. The system comprises six values that exert influence on women’s ability to prioritise and make decisions on how to spend their time, day to day. Whilst the strength of influence for each value varies between women and life stage, all play a critical role throughout the life course. Not only does this highlight the importance of sport to appeal to this complex value system, providers must amend their ‘offer’ to specifically suit women and girls, not expect them to navigate or change to suit their sport.

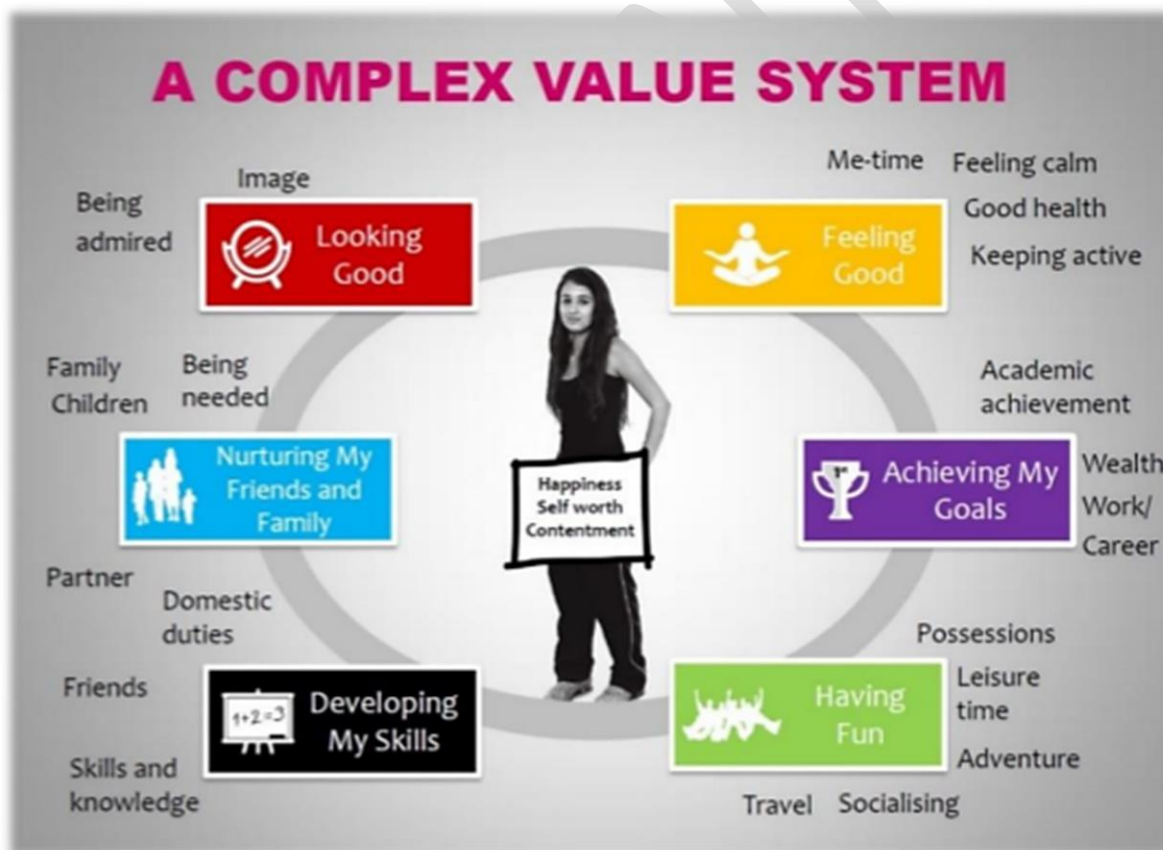


Figure 3 Source: Understanding women’s lives (2013). Women in Sport, UK.

To have wide appeal, Sport must align with women and girls’ core values - reflecting what is important to them at a specific stage in life. The opportunity for sport to apply this insight and align with sporting products, communications and delivery is huge.

Factors affecting participation

Motivations and influencers on sport participation

It is vital from birth that all children are provided with the freedom to move and that children are supported and encouraged to develop fundamental movement skills in order to facilitate lifelong engagement with physical activity. At this time, adults, peers and siblings play a critical role in influencing positive behaviours and encouraging children to move more and sit less. There is a wealth of literature within the physical literacy domain that specifically provides a framework for action and recommendation for researchers, policy makers and practitioners. Whilst this is beyond the scope of this report, it is important to reiterate the need for girls to foster an early positive experience with physical activity in order to promote lifelong engagement. As children grow, research highlights that motivations to be physically active are primarily around skill development, having fun with friends and improving their body image (13,14).

Research exploring motives to participate in sport at a young age identify two strong influencers - fun and body image. Body image is complex as it can encompass weight loss and weight maintenance along with a desire to fit in with the societal view (15). The influence of body image strengthens with age and is a powerful influencer throughout adolescence (15). Whilst fun might no longer be explicitly reported as a primary motivator, studies have shown that the 'fun factor' remains a critical factor in determining participation in physical activities as girls mature into adulthood (16,17). Parental physical activity levels, support and encouragement are key influencers for young girls (18).

Adolescence is widely recognised as a difficult and stressful time for young people because of the rapid changes in body image and self-esteem, changes in friendships and peer group, coupled with a transition between school systems (19). In addition, participation in sport and physical activity declines, reinforced with a higher sport club withdrawal rate (19).

Young women aged between 18 and 35 have been found to be more motivated by appearance, a desire to fit in and weight loss yet conversely can view societal expectations and body image as barriers for participation (13). Life events and progression through the lifecourse is a strong influence on participation. Women who are managing the demands of education, work, home and family life as well as the emotions associated with each domain, face unique challenges to participation. Mothers of young children, while still motivated by appearance, often prioritise their children's activity above their own. In older age, individual confidence and perception of ability is a strong influence of engaging in sport, along with the perception of safety and availability of resources and facilities, especially in frail or less mobile populations (13). Women throughout the lifecourse place more importance on the social aspects of physical activity and sport and are less motivated by performance outcomes (20).

Gender has been long seen in participation data as an influencer or predictor of sports participation, but recognition of the gender stereotype as a barrier for participation has only been identified in females (21,22).

Fisette et al., found that girls felt a sense of being compared to the boys and that boys dominated the space available for physical activity in the schools sport setting – resulting in girls being less likely to participate if boys were present (21).

Tackling existing stereotypes in sport and active recreation can be difficult. Challenging stereotypes for women and girls participation is a vital aspect of increasing participation and requires both cultural change and strong leadership at all levels of sport, active recreation and broader society. One promising example is the promotion of positive female role models and enhancing the visibility of active women and girls in the media (23). These strategies are beyond the scope of this review however are an important consideration for strategies aiming to increase participation of women and girls in sport and active recreation.

Barriers

Most women and girls know that sports and physical activity can deliver numerous health and wellbeing benefits yet, for a wide range of reasons they do not participate regularly. Numerous studies and pieces of work have been commissioned in an attempt to understand the barriers for women's participation in sport. Whilst a snapshot synthesis of existing evidence is provided here, the reader is directed to several key documents for further reading namely; Sport England; Queensland Government Start Playing Stay Playing and the Victorian Inquiry into Women and Girls Participation in Sport and Active Recreation(24–26).

Cost is a common and consistent barrier for women and girls to participate. Competing demands for time is a recurring barrier for women and girls across the life course, whether it be caring responsibilities, social, work or study commitments or the lack of flexibility in the sporting offer available. That said, Sport England (2014) suggest that whilst time might be the most frequently cited barrier, it could actually be covering her real 'emotive' barrier (27). Fear of judgement can come from multiple angles and women and girls may feel they are not living up to expectations of their family and friends, or do not compare well to others, or feelings of guilt are reinforced as they feel spending time on exercise could be seen as self-indulgent, neglecting maternal and domestic responsibilities. Body image can be a strong barrier not necessarily confined to the sport itself but also the clothing and uniforms required to participate. Sometimes such uniforms in some sports, figure hugging or revealing outfits could make some women and girls feel uncomfortable. Feelings of inadequacy and a lack of self-esteem or confidence in ability can be a barrier to participation.

Some barriers are reinforced by the nature and design of the sports program itself. Examples of this include the quality of the coaching practices, a lack of consideration given to female physiology and skill acquisition. Whilst others relate to environmental factors including the standard of training facilities and female only changing rooms. If the social aspects of sport are not valued by a coach or provider then this can affect participants' initiation and likelihood of sustaining a relationship with the sport or active recreation.

Cultural backgrounds and wider systematic factors influence participation for women too. Women from disadvantaged communities, and from culturally and linguistically diverse backgrounds, experience social

and economic challenges to participate evidenced by lower participation rates across sport and active recreation.

In summary, the key principles to consider when understanding women's participation in sport and what influences their decision to engage in sport are provided below. These are an amalgamation of existing evidence based, best practice principles (26,28).

Change the offer to suit the women you are targeting

Re-frame the message. Don't just talk sport!

Promote the unique health and wellbeing benefits for women

Normalise the presence of women in sport. If they can see it, they can be it.

Use positivity and encouragement to drive action (not negative, fear of consequence)

Make it easy for women to engage

Promote the social, fun and enjoyable components of the program for all ages.

Applying a 'Socio-ecological model' to participation amongst women and girls

Under the socio-ecological model of health, influences on participation in sport and active recreation, are categorised by intrapersonal (emotions/thoughts), interpersonal (family and friends) and environmental (facilities, neighbourhood safety). The value of applying this approach to sport and women, is that it not only identifies the individual factors influencing participation, yet appreciates the complexity which with each factor interacts. This is demonstrated well by Casey et al, (2009) when exploring the sports participation amongst girls in rural Australian communities (19). The additional strength here is the consideration given to contextual factors, namely environmental and policy variables which help provide 'the bigger picture'. Figure 4 provides a conceptual diagram illustrating its application.

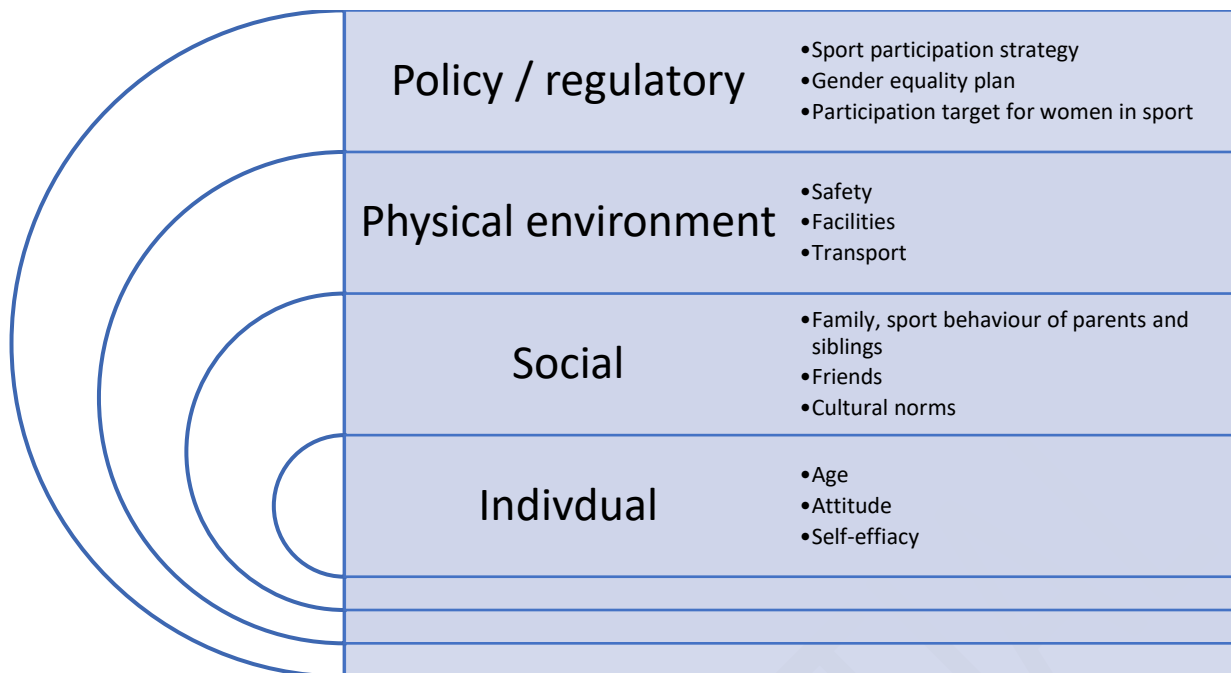


Figure 4 Applying the socioecological framework in the context of women and girls participation

Recommendations for action

- The decision for women to participate in sport is complex spreading across all 'socio-ecological' domains. Therefore, the socio-ecological framework should be applied during the design, implementation and evaluation of a women in sport strategy.
- Complex issues spreading across personal, social and emotional life factors affect women's participation in sport.
- No one size fits all approach. Creative, imaginative and insight driven approaches are needed.
- The visibility of women in sport must be enhanced to inspire young girls and to normalise participation for adults.
- Participation strategies must look beyond age, and consider the impact of life stages and life events on participation.
- Sport must align with women's values through three key channels; Strategy, programming and communications.

3 Approaches to increase girls and women participation in sport and active recreation

a. Targeted policies

*This chapter will explore to what extent do standalone policies targeting women and girl's participation in physical activity, sport and active recreation exist?
What are the characteristics of these global and national policies?*

Policy is a formal statement that defines priorities for action, goals and strategies and provides a guide to action to achieve an intended goal, initiated by government, non-government, or private sector organisations (29). Policies set a precedence and often a target which makes people accountable for actions of public importance and can have a significant impact on population health. Gender equality policies and legislation are an important part of an equitable society. Importantly, in Australia, there has been a Sex Discrimination Act in place since 1984 and a state-level Anti-Discrimination Act since 1977. Countries which have higher rates of gender equity, such as Scandinavian countries, also have higher rates of participation in sport by women and girls (7).

Researchers in policy literature have consistently advocated for cross-sectoral, multi-agency partnerships (29) yet in the physical activity and public health policy literature, sport has been remarkably absent from the agenda (30, 31). Collectively, the strong body of growing international academic evidence and the global political drivers, reinforced by the 2011 UN political declaration and WHO Global action plan on NCD's prevention and control 2013-2020, emphasise the urgent call to action for promoting population changes in physical activity. This call to action recognises the integration of sport within the public health agenda, and again reinforces the importance of a multi-agency approach.

A review of physical activity and sport policies that specifically target women and girls was conducted. Table 7 identifies and summaries key information related to the most prominent international examples of such approaches allowing for easy comparison and a summary of key learning which is also included in this chapter. The value of conducting this task is that it enables synergies and potential opportunities for collaboration across the sport and physical activity sector to be recognised, with a view to the identification of best practice principles for government policy and to inform a strategic approach to participation in NSW, Australia.

Table 7 Targeted policies to increase women and girls participation in physical activity, sport and active recreation

Country/Region, Policy	Strategic goals/objectives	Governance lead and partners	Success metric	Goals and key learnings
<p>European Commission, Gender Equality in Sport. Proposal for strategic action 2014-2020 (32)</p>	<p>Develop, monitor and review national action plan on gender equality in sport Gender balance and equality in decision making in sport and coaching. Fight against gender based violence in sport. Fight against negative gender stereotypes in sport and the role of the media. Horizontal tools and measures.</p>	<p>European Commission</p>	<p>Proposal for action to be undertaken by EU countries</p>	<ul style="list-style-type: none"> - Sport governing bodies should establish a database taking into account different subgroups - develop communication plans and campaigns including the media with focus on the benefits of a gender balance in all sport - support national projects including the training and education of sport administrators, - All stakeholders should report developments (research, projects, evaluations) in the field of gender equality in sport at national
<p>Women Win (33)</p>	<p>To equip adolescent girls to exercise their rights through sport. 1. Build ASSETS There are three primary assets that can be built through sport: social, human and sport skills. 2. Provide ACCESS to resources</p>	<p>Women Win. Non-Government Organisation</p>	<ul style="list-style-type: none"> - Women win offers International guidelines for addressing girl’s rights through sport. - collective impact strategy to measure the influence of sport on the lives of girls with a global 	<p>The outcome is positive growth in girls’ B.A.C.K.S. (Behaviour, Attitude, Condition, Knowledge and Status) related to a variety of issues, including economic empowerment, sexual and reproductive health and rights, and gender-based violence.</p>

	<p>Well-designed sport programs can help link girls to health, education and other critical sectors as well as provide access to powerful and important information for their healthy development.</p> <p>3. Develop AGENCY</p> <p>Sport gives girls the opportunity to develop self-determination in a safe environment.</p>		<p>set of partners who have a shared interest in the topic, using Salesforce as a common platform for data collection and analysis</p>	
<p>Canada, Actively Engaging Women and Girls, A supplement to Canadian Sport for Life(34)</p>	<p>Continuously improving sport system where women and girls are actively engaged:</p> <ul style="list-style-type: none"> • as athlete participants, from playground to podium; • as coaches, technical leaders and officials and are also supported to progress within international organizations as technical leaders and officials; • As governance leaders of Canadian sport organizations and are also 	<p>Canadian Association for the Advancement of Women and Sport and Physical activity</p>	<p>Policy Accountability Framework: Logic Model</p>	<p>Five areas for action:</p> <ol style="list-style-type: none"> 1. Develop, promote and enforce effective policies to ensure gender equity 2. Promote and demonstrate the value of women and girls in the Canadian system. 3. Develop and strengthen the capacity of the Canadian sport and physical activity system to support the active engagement of women and girls. 4. Strengthen partnerships and action within and across sectors to influence national, provincial/territorial, community sport and physical activity environments.

	supported to progress within international sport organizations.			5. Support, conduct and disseminate gender-specific research and evaluation.
Canada, Advancing Opportunities for Women and Girls in Sport: Ontario's Action Plan.(35)	<ul style="list-style-type: none"> • Advisory group to identify actions that remove barriers and improve the participation of women and girls in sport • Creating an information sharing platform for sport organizations to share best practices in recruiting, developing, supporting and retaining women. • Requiring all before and after school programs to have staff trained in diversity and inclusiveness, to promote a welcoming environment that is reflective of the unique needs of girls, and to ensure that girls can participate at the same level and frequency as boys. • to promote the inclusion of 60 minutes of physical activity for children and youth connected to the school day 	Premier. Department of Tourism, Culture and Sport	<ul style="list-style-type: none"> - Women have opportunities to assume leadership positions in sector. - All women and girls, regardless of race, ethnicity, sexual orientation, physical or intellectual ability, have equal opportunities in sport. - build the necessary skills to facilitate lifelong participation in sport. - The achievements of females highlighted throughout Ontario. - Gender equality in the coaching system. All coaches develop sensitivity to the particular needs of athletes of all genders. - Sport delivery partners are committed to ensuring compliance in the equitable delivery of their programming and services. - PSOs/MSOs have technical programming and system planning that is specific to the needs of women and girls and contributes to excellence. - Opportunities for women and girls to access and participate in grassroots sports are readily available and accessible within their communities. - supported within the education system with quality physical education and access to physical activity opportunities across the school day. - Equal access to sport program funds, scholarships, facility space, leadership positions and programming are available for women and girls. 	
UK, Women in Sport - Girls Strategy (36)	<ul style="list-style-type: none"> • Create a coordinated and connected approach to the sporting landscape for girls (5 – 18 years) 	Women in Sport	Recruit an additional full-time resource by way of	Key deliverables in the following areas: <ul style="list-style-type: none"> - Education: school, further education and transition into higher education

	<ul style="list-style-type: none"> • Make current 'best practice' for engaging girls 'standard practice' in educational settings • Engage and activate key influencers • Reduce drop out at key life stages 		a Girls Partnerships/ Project Manager.	<ul style="list-style-type: none"> - Community: outside the school gates - Influencers: the people in a girl's life - Media: communication channels relevant to girls 5 – 18
UK, Women and Sport Advisory Board (37)	<ul style="list-style-type: none"> • Increasing women's participation • Improving the media profile • Increasing commercial investment in women's sport • Improving women's representation in leadership and the workforce • Greater recognition for women's sporting achievements 	Department for Culture, Media & Sport, UK Government		<p>Recommended actions to increase women's participation in sport:</p> <ul style="list-style-type: none"> - NSO set and publish specific targets to increase women's participation and reduce the persistent gender gap. - Use toolkits to adapt sport offers to suit women and girls - Use 'Women's Sport Week' to appeal to new audiences and attract new participants
Victoria, Changing the Game – Increasing women's participation (18)	<p>Getting tens of thousands of Victorian females who are inactive and somewhat active to become active more regularly through sport.</p> <p>Raise the profile of female sport and be a champion for female sport and health on a large scale.</p>	VicHealth	Facilitate sporting codes to work with women and girls who don't normally participate in sports programs that are provided through clubs and competitions.	The six competitions were developed and are currently being implemented by sporting organizations in Victoria.

<p>Victoria, Vic Health's Physical Activity Strategy 2018-2023 (38)</p>	<ul style="list-style-type: none"> • Create and promote more tailored participation opportunities for women and girls. • Raise the profile of women's sport and physical activity and improve attitudes towards gender equality. • Influence sporting environments to become more inclusive of women and girls. 	<p>Vic Health</p>	<p>Frequency of physical activity participation (30 minutes or more) in:</p> <ul style="list-style-type: none"> - organised PA - non-organised PA <p>Sedentary behaviour at work: Time spent sitting on usual work day</p>	<p>The general physical activity strategy developed by VicHealth has objectives related to women and girls and gender equality.</p>
<p>Queensland, Start Playing, Stay Playing (39)</p>	<ul style="list-style-type: none"> • build on opportunities through funding programs to target women's and girls' participation • physical environments that are inclusive and safe to support women's and girls' participation • enriching practices and building the potential to improve women's and girls' participation opportunities • to ensure a coordinated effort to improve women's and girls' sport and active recreation opportunities 	<p>Queensland Government</p>	<p>Physical activity measured by Queensland health includes sport and active recreation activities, along with activities such as chores and active transport</p>	<p>Their roles relate to key themes identified which need addressing:</p> <ol style="list-style-type: none"> 1. Gender stereotyping and attitudes 2. Support provided by sport and active recreation organisations 3. Families and schools as vehicles for cultural and societal change 4. The perception of sport and active recreation as Anglo-Saxon 5. Funding inequity for women's and girls' activities 6. The cost of sport and active recreation

	<ul style="list-style-type: none"> • Marketing: effective promotion using existing and emerging opportunities. 			
Tasmania, Tasmanian Women's Plan 2013-18 (40)	<p>Equality for all women and girls and their full participation in the economic, social, political and community life.</p> <p>As part of the health and wellbeing priority, collaborate across agencies to promote and encourage girls and women from all backgrounds to participate in higher levels of physical activity, sport, and active recreation.</p>	<p>Sport and Active recreation</p> <p>Tasmania, Department of Economic Development, Tourism and the Arts</p>	<p>Equality for all women and girls and their full participation in the economic, social, political and community life of Tasmania.</p>	<p>Six outcome areas that were identified through consultation with the Tasmanian community:</p> <ol style="list-style-type: none"> 1. Economic Security and Financial Independence; 2. Education and Training 3. Health and Wellbeing, including: <ul style="list-style-type: none"> - Collaborate across agencies to promote and encourage girls and women from all backgrounds to participate in higher levels of physical activity, sport, and active recreation - Implement the Ethics in Sport Framework to encourage inclusive, safe and fair sporting environments 4. Housing and Homelessness; 5. Leadership and Community Participation; 6. Safety and Justice

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<p>Tasmania, WomenSport and Recreation, Strategic plan 2016-2019 (41)</p>	<ul style="list-style-type: none"> • To support Tasmanian women and girls to be change agents in sport and active recreation. • To champion sport and active recreation as a source of work, development, community leadership, health and wellbeing. • To advocate for women’s sport and active recreation and be a key influencer to government and other stakeholders. • To operate a progressive, sustainable, accountable and transparent organization. 	<p>Womensport & Recreation Tasmania Incorporated</p>	<ul style="list-style-type: none"> - Successful policy and funding applications - Expansion of programs - Increased attendance at workshops, programs & events - Increased membership, donations, & grants - Widespread publicity & awareness of WSRT - Growth in the number of females participating in sport & active recreation 	<ul style="list-style-type: none"> - Increase female participation numbers - Reduce barriers to participation - Increase females in leadership roles - Improve diversity and inclusiveness of sport and active recreation at all levels state-wide - Improve and increase awareness of WSRT - More coverage of females in Tasmanian sport and active recreation - Growing attendance at workshops, programs etc and positive feedback - Increased females working in sport & rec - Increased funding and partnership arrangements - Data supporting improved health outcomes
<p>South Australia, Women in Sport Taskforce Plan of Action (42)</p>	<ul style="list-style-type: none"> • Improve gender equality • Change the face of sport leadership • Increase spectators for women’s sport • Attract women’s sporting events • Broadly align sport strategy and diplomacy with cultural events 	<p>Office for recreation and sport, Government of South Australia</p>	<ul style="list-style-type: none"> - Gender equality in options and satisfaction from sports - Sport leadership - Increase spectators - Increase women’s sporting events and add a code of conduct 	<ul style="list-style-type: none"> - Funding program established - Increase in female membership and programs at funded clubs - Increased satisfaction of women and girls as members of sporting clubs - Female friendly usage policy produced and implemented

			Sport strategy.	- Government tender applications required to demonstrate consideration of gender perspective
Northern Territory, Women in Sport Advisory Council (43)	<ul style="list-style-type: none"> • Facilitating the participation of all women and girls in sport and active recreation at all levels • Encouraging strong gender balanced leadership in sport and recreation to enable real change • Promoting women's and girls' involvement in sport and active recreation at all levels • Encouraging safe, comfortable and culturally appropriate sport and active recreation places and spaces. 	Northern Territory Government	Advisory only. EOI's closed in October 2017.	<ul style="list-style-type: none"> - to 'take the pulse' of community sentiment in women's participation in sport in the NT - raise the profile of NT women in sport - explore the issue of gender equality in sport and active recreation in the NT - Provide advice and monitor whether the policies and strategies are meeting community need, and where changes are necessary. - Advise the Minister on practical actions for the sector to enhance participation by women and girls and to increase their engagement in leadership and governance roles in sport

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Summary of Key Policy Learning

A critical component surrounding the implementation of physical activity related policy was the existence of gender equity legislation. Subsequently, women in sport dedicated taskforce/advisory or advocacy groups played a key role in the development of actions to increase participation among women and girls. Such groups appear to have greater autonomy to develop multi-sectoral plans and include accountability as the stakeholders required to implement the plan are involved in developing it. This is critical learning for NSW, Australia.

Leadership and multi-sector collaboration

Addressing gender equality so that women and girls have opportunities to participate in sports and active recreation requires systemic solutions across the sector. Existing action plans aiming to increase participation of women and girls in sport have been led or strongly guided by a dedicated taskforce/advisory or advocacy group. The membership of these groups are often made up of representatives from different sectors, such as media, education, law and of course sport. The scoping completed for this review identified that less than half (46%) of the existing women and sport policies were led by a government department. In many cases, women in sport action plans have been developed and led externally to governments.

Build upon current understanding

Participation in sport is often segregated by gender/sex. Sporting organisations which service both genders may argue they provide separate, yet equal opportunities for women and girls to participate. However, due to funding differences, facility access and organisational structures within the sport and active recreation system, opportunities for women and girls are often less or of a lower quality (e.g. time of play, game location, training of coach) (44). Monitoring the difference between the opportunities for both genders to participate equally within organisations, may shed some light on specific actions which could be taken to improve gender equality in sport settings.

Specific goals and targets

Countries which have population-wide sport and physical activity action plans may mention gender equality, however few have stand-alone objectives or strategies devoted to increasing women and girls participation. This may be an artefact of the pace in which population-wide physical activity actions have been developed and implemented. Interestingly, some regions are showing leadership to address the apparent inequality in women and girls participation.

Few countries have strategies devoted to increasing women and girls' participation in sport and active recreation. This presents an opportunity for NSW, Australia to lead and drive change across Australia and beyond.

One significant flaw in the existing women and sport policies and action plans are the lack of targets and measureable indicators. Although some plans assign accountability to the objectives, there is a need to define measurable outcomes. Global best practice recommendations suggest the use of Specific,

Measurable, Achievable, Relevant, Time-limited (SMART) frameworks to policy goals i.e. increase participation of Girls by X% over X years.

Funding for women and girls programs

Funds which are sought by sport and active recreation providers specifically to increase participation of women and girls. These funds should only be granted a clear criteria for evaluation to demonstrate the impact of the intervention on participation. Previously, funding assigned to targeted program delivery shows effect during the funding period however is unable to maintain provision of the activity without the funds. Another option is that they spend all funds on developing a sustainable program but there are no funds to demonstrate the effectiveness of the program. Sport England has funded programmes through a national lottery aiming to increase the attraction of sport and physical activity to women and girls. The evaluations of the funded program have been instrumental in progressing future interventions and social media campaigns to increase women and girls participation.

Recommendations

The existing policies which have been implemented to increase women and girls participation in sport and active recreation have been developed mainly over the past few years. As such, there has been limited capacity to demonstrate their influence on increasing women and girls' participation. Evidence informed policies, when implemented using an equitable, comprehensive, multifaceted and multisectoral approach, will over time improve participation in physical activity, sport and active recreation among women, girls and likely the whole population.

The learnings from these targeted women and girls physical activity, sport and active recreation participation policies lie in the institution of clear and measurable objectives across the following areas:

- Foster and embed a gender equality culture throughout all core business
- Increasing participation of women and girls across the life course
- Understanding and reducing barriers specific to women and girls
- Create gender balance throughout sector – leadership, coaches, athletes, volunteers & players
- Inclusive and safe physical and social environments in sport settings
- Positive media representation of women and girls being active, enhancing the visibility of this
- Targeted, ring-fenced funding for women and girls interventions to increase participation

Additional features which have been incorporated into some action plans and strategies include:

- Information sharing between organisations of what works to increase women and girls participation
- Recognition of programs which effectively engage women and girls
- Recognition of female athletes' sporting achievements

b. Programmatic ‘best buys’

The need to increase women and girls participation in sport and active recreation has been long recognised in the literature. In Chapter two of this report, we presented insights on a variety of physical, psychological, social and ecological factors which play a role in shaping women and girls’ participation. Understanding the unique factors which influence how likely women are to be active throughout the lifecourse is key to the development of targeted interventions. Using localised knowledge of barriers to participation, interventions which enable and encourage women and girls to be active, are likely to foster greater success. Recent systematic reviews investigating successful interventions found heterogeneous studies, many of which lacked rigorous methodologies and were only conducted over a short time period.

This Chapter aims to identify promising approaches and ‘best buys’ for programmatic interventions for individuals, education and sport settings and mass media campaigns. This will highlight innovative approaches which have been used to increase women and girls participation in sport and active recreation.

What approaches show promise to get women and girls moving for life?

Participation does not follow a stable trajectory throughout life. International estimates of women and girls physical activity throughout the lifecourse have been described in Chapter One. Transitions from childhood, through puberty to adulthood, beginning to work, starting to live on one’s own, starting to cohabit or getting married, the birth of one’s first child and retirement all affect individuals likelihood of having sport club memberships and participating in sports (45).

The impact of life events on participation is overwhelming and there is a need to ensure appropriate, flexible, offers are available for women and girls to engage with. The premise of enhanced ‘on ramps and off ramps’ for sport participation for women and girls to start participating or try new activities throughout their lives has been recommended (46). For adults and older adults, research suggests that doctors have a good opportunity to direct people towards physical activities. Identification of doctors as partners in the promotion of activities may be an effective way to reach women and girls during a transitional phase such as pregnancy, menopause and other life events (47). Education settings and partnerships between schools and sporting organisations provide another opportune ‘ramp’ to increase participation among school aged children.

When planning and designing interventions to increase participation, the most significant impacts on population health will be achieved through targeting priority populations of women and girls. Identifying priority populations based upon evidence shown in Chapter one of this report, are likely to induce the largest benefit for individuals whilst also showing a change at the population level. For example, women and girls

An equitable, comprehensive, multifaceted and multisectoral approach is necessary to build women and girls participation in sport and active recreation.

from areas of socio-economic disadvantage, those who speak a language other than English at home or certain stages in the lifecourse will require different interventions which address their specific barriers to being active. Adoption of a person centred approach, whereby the identified target audience is involved in planning the intervention, shows promise.

A number of interventions in Appendix 1 and Appendix 2 have demonstrated positive increases in women and girls physical activity participation through focusing their actions on those with the greatest potential for improvement.

A recent systematic review and meta-analysis of interventions among women experiencing disadvantage demonstrated the importance of group-based programs to promote physical activities (48). The group dynamic in programs enabled participants to build support networks for both physical and psychological wellbeing. Social support in the effective programs was operationalised through participant interaction, but also programmatic features such as assistance with transport, day care and educational resources. Independently, social support from family and friends had a significant influence on physical activity participation. Social factors are a major incentive for women and girls to participate in sports and should be harnessed to incentivise participation. Programs which prioritise socialisation, fun and enjoyment during the activities report higher retention of women and girls across the lifecourse.

In addition to enjoyment, there is strong and consistent evidence that sport and physical activity programs should be underpinned by behavioural change theory. Behaviour change theory can, and should be, applied for interventions at an individual, household, community and population level to have the greatest influence on increase women and girls participation (49). The most frequently used behaviour change theories identified in promising interventions were self-determination theory, stages of change model, social-cognitive theory and the theory of planned behaviour. A book symbol has been used in the Appendix's to highlights programs which applied theoretical frameworks to their intervention. Programs which clearly document their use of behavioural change theory and the relationship between the theory and their intervention often improve participation amongst women and girls.

School setting

The most effective school-based interventions to increase participation in sport and physical activity employ the health promoting schools framework and undertake a whole-of-school approach. This involves linking curricular activities with the broader school environment and local community.

There are many opportunities within and outside curricular activities to increase participation of girls in sport and active recreation, providing social, academic and health benefits to school students.

These broader, education sector strategies are addressed in Reece et al, (2017).

Interventions to specifically influence physical activity behaviour of girls in school settings are underpinned mostly by self-determination and empowerment behaviour change theories. The evidence suggests that participation was promoted by consultation with girls, implementation of appropriate peer-leaders and friendship group strategies, early intervention and based in the school (50). The short-term interventions were able to demonstrate effect in getting girls to try new activities however whether participation in the news ports were sustained is unclear. Enright (2010) involved school aged girls in designing the curriculum, selecting the sports to be undertaken (51). Increasing student's choice in the activities taught during Physical Education was shown to positively influence their participation. Linking girls in school sport programs to the community clubs which interest them during curricular time may be a potential strategy to sustaining participation in sport and active recreation after trialled during class time.

Sport and active recreation clubs and organisation settings

A recurring theme throughout this review is the importance of fun, enjoyment and the social aspects of sport which influence participation among women and girls through the lifecourse. Competitive situations which promote winning over enjoyment may cause some people who are interested in having fun to leave the sport or activity, as they can reinforce feelings of inadequacy and fear of judgement seem inadequate (7). Sports aiming to increase participation should shift their focus from talent development towards engaging participants who would not usually participate and encourage them to be active for life.

Guides and toolkits have been developed to assist sporting organisations to create environments which encourage women and girls to participate in sport and active recreation. Sport England has also developed a practical guide for sports clubs in community settings that gives detailed advice on 'How to' plan and deliver sport more effectively for women and girls (27). This How to guide can be [accessed here](#). The Women, Win, the Queensland Government and VicHealth have also developed checklists which sporting organisations can use as a guide to ensure their offer is appropriate for women and girls (33,52,53).

The following provides a summary of overarching design features collated from guides, toolkits and available evidence to be applied in the sport and active recreation clubs/organisations.

Deliver group activities

Adopting a group delivery mode, rather than individual or community delivery, significantly increases the amount of weekly physical activity achieved by socio-economically disadvantaged women (48). Women of all ages, sizes and backgrounds are largely motivated to participate in physical activity by social interactions; these are integrated within group delivery models.

Create inclusive cultural environments

There is evidence that healthy and welcoming environments in sports clubs can have positive influences on participation, especially for adolescent girls (53). For girls, welcoming environment characteristics such as knowing someone at a club, friendliness of the coach, skill and/or experience of the coach, the day/time of competition/practice sessions and a friendly club in general were key. Additional environmental characteristics including smoke-free environments and injury prevention strategies had a positive influence on participation.

In addition to ensuring women and girls who are participating in the sport are welcomed, clubs should consider ways to include non-participating women in their activities. Parents of young children are prime example of non-participating women who could be engaged as volunteers. Parents who participate in sports clubs, either as players or volunteers, are more likely to have active kids and who also play in sports clubs.

Identify priority populations of women and girls

There is a lack of available evidence of programs and interventions which target inactive women and girls. This could be due to the challenges in measuring inactivity in populations. Emerging programs informed by physical activity literature suggest that targeting inactive populations will achieve the greatest population health improvements (1, 9).

Research with priority populations further highlights the need for inclusive cultural environments. Emerging evidence proposes moving beyond a sports development paradigm and deficit model of sports participation, towards incorporating marginalised groups of women and girls into the mainstream sport. A few examples of programs which have been adapted for Muslim women show promise (54–56). Interventions which provided opportunities for Muslim women to receive training and leadership opportunities in sports settings were able to act as champions and increase participation of other Muslim women and girls in their community(54). It is important to pay attention to the way marginalised groups of women and girls are involved in sport and active recreation and provide equitable opportunities.

Partner with key target groups

Working in partnership cultural or religious groups, using an Asset Based Community Development (ABCD) approach, to inform an intervention, has strong evidence for increasing sport and active recreation participation. Further from the importance of group activities, priority populations which gather for cultural or religious reasons, provide a network of partners which could be utilised to increase sport and active

recreation participation in their community. Additionally partnering with non-sport settings and organisations such as doctors and supermarkets to provide information about sport and active recreation opportunities may extend engagement to new audiences

Well-trained program facilitators

Ensure program facilitators are focused on motivating and supporting women and girls to participate in activities. Facilitators should be aware of women and girls complex value system and ensure that participants are encouraged to be active in the sport. The activity provided should be equal to that which would be provided to men and boys however may be delivered using a different approach which incorporates a larger degree of interaction between participants and tempers competitive aspects.

Providing activities at the right time

Timing of activities has consistently been used in programs which have been tailored towards women. This may involve changing the duration of the activity (shorter or longer) or offering the activity at a new, more ideal time of day for the intended participants. With the demands from study, work and or home duties, ensuring there are opportunities to participate in sport and active recreation at a time women and girls are available to access the activity is essential. The appropriate timing will be different throughout the lifecycle. Sports providers which who offer activities at time which suits women (for example, directly after school drop off time for young mothers) are able to reduce the perceived and actual barriers to participation.

Appeal to women and girls motivations/strengths in sport promotion and marketing

Promotion should champion the fun and enjoyable experience of participating in the activity and use relatable images of culturally diverse women. Depending on who the target is, the communication should consider the pathway they would need to undertake in order to start participating. To increase participation of inactive women and girls, using athletes to communicate, highlighting competition or even using the work 'sport' is unlikely to appeal to them. The communication adopted throughout the organisation and promotional material should be around the value system of the target audience.

Reduce financial barriers at the start

Many factors may contribute to whether women is in the position to commit payment for a sport. These include current energy levels, confidence, perceived ability, social support, work-life demands, and of course their current financial position and socio-economic status. Flexible payment options may enable women and girls to transition from thinking about starting an activity to giving it a go. Strategies which have been employed include loyalty cards, bring a friend offers and free introductory sessions which provide a positive initial experience. Specific (time-limited) incentives or rewards, such as vouchers, deals, and freebies can create a sense of urgency and anticipation (26).

Appropriate equipment and apparel

Traditionally, women's physical activity apparel is often linked with sexuality (e.g. suggestive uniforms and training/workout apparel; culturally stereotyped media coverage of active and athletic women that emphasize femininity and heterosexuality, including sexually suggestive poses in sport settings) and can act as barrier to participation (57). Women and girls with body image concerns either be more or less likely to engage in sport. Sports programs for women and girls should address body image concerns. Where appropriate, provision of information regarding bra-fitting may be beneficial to increase participation(58).

In some sports and recreation activities, women participate using equipment which has been modified to suit their proportions, such as golf and tennis. Sports should consider whether an adaption of equipment is required for female participants. In Denmark, the modification of women's soccer balls to smaller circumference and a lower weight was studied. The new ball could be kicked 3–4 m longer by women which increased participation in the sports fan base but also club participation among women and girls.

Community-wide (Mass media and social marketing)

Mass media and social marketing campaigns are a public health strategy which can be purposively designed and implemented to increase community awareness about particular health-issues. They are also classified by the World Health Organisation as one of the seven best investments for increasing physical activity at the population level.

Mass media and social marketing campaigns have been shown to be effective in changing whole community understanding, beliefs and attitudes as well as building intentions to undertake health enhancing behaviours at the population level. Examples include; sun safety, HIV-Aids prevention and seat belt use. Mass media campaigns which ask you to go from doing nothing to doing something (simple, clear messaging) show promise and as a result, several campaigns have been developed and implemented with the intention of getting more women and girls to participate in sports and active recreation. This section summarises recent (last 5 years) targeted campaigns for women and girls, provides a summary of their design and approach, and where appropriate evidence of their early evaluation findings.

UK Government – This Girl Can

This Girl can was launched by Sport England during 2015 (59). It is a nation-wide social media campaign developed by a creative agency informed and shaped by nine months of research undertaken. One of the key findings from Sport England research was that the fear of judgement by others is the primary barrier holding women back from participating in sport. This fear covers concerns over their appearance, ability, or the simple fact they are choosing to spend time on themselves, rather than on their families (60). The

campaign shows a diverse range of women engaging in exercise where they are sweating with body fat jiggling, demonstrating realistic depictions of exercise in a non-objectified manner (61).

Initial evaluation findings highlight 1.6m women have started exercising as a result of the campaign. Moreover, the number of women playing sport and being active is increasing faster than the number of men in the United Kingdom (60)

Australian Government – Girls Make you move

Girls Make Your Move is about inspiring, energising and empowering young women to be more active regardless of ethnicity, size or ability (62,63). The approach was inspired by the UK's This Girl can campaign (59). The objectives of this campaign were to:

- build and reinforce positive perceptions of physical activity and sport
- increase intentions to participate in physical activity among young women aged 12-19 years.

The campaign has been running across Australia since 2016 and has had two interim evaluations during this time. The most recent research has shown the campaign achieved high reach among 12-19 year olds and they found it engaging, motivating and empowering. Measures such as impact on physical activity behaviours and intentions are long term goals which have not been demonstrated by this campaign in such a short period of time.

Queensland Government – #Jointhmovement

A report prepared for the Queensland Government's Ministerial Advisory Committee on Women and Girls in Sport and Recreation recommended the development and implementation of a marketing and communications strategy to encourage more women and girls to be physically active (64)(39). A series of videos were been developed, one for the overall campaign then additional videos with specific target audiences, such as mothers of young children, people with physical impairments, older women and working women. They all feature realistic representations of the female body shape engaging in exercise and have a story telling approach (available here: <https://www.jointhmovement.qld.gov.au/>). The campaign aims to encourage women to lead an active lifestyle.

Research has shown that women who viewed the #jointhmovement campaign videos had higher intentions to exercise and enhanced satisfaction with the appearance of their body post-video. The increased exercise intentions did not translate into greater exercise behaviour at one-week follow-up, as expected (61). Viewing campaign videos did not lead to behaviour change or even sustained intention to exercise. Further research into the impacts of the #jointhmovement campaign were not available at the time of this review.

VicHealth – This Girl Can

In December 2017, VicHealth announced they would be collaborating with Sport England to create a locally relevant version of the social marketing campaign which has reached over 13 million people in the United

Kingdom. At the time of writing this report, the campaign had not begun yet local insights and case story building was underway.

Industry led Initiative – Da Da Ding, NIKE

"Nike's campaign aims to inspire people to take up sports by showing the unstoppable feeling that only sports can deliver. The campaign showcases a series of young athletes across India who are unstoppable."

NIKE aimed to use the story of these athletes, all wearing NIKE apparel, to inspire women to take up sports. This campaign adopted the premise that every woman or girl can be an athlete, and was a part of the #JustDoIt campaign. Although the ad is no longer on the NIKE YouTube Channel, many spoof videos have been created and the reloaded versions of the original have over 95K views. To our knowledge there has been no investigation into the impact of this campaign on physical activity participation among women and girls in India.

Industry led Initiative – Unleash Your Creativity, Adidas

This Adidas campaign uses authentic stories of 15 female athletes around the globe who use creativity to defy conventions, reinvent routine, create their own path and inspire others to make a difference in sport. The storytelling approach engaged viewers across 20 countries after it was realised online and aired during the Super Bowl LI Pre-Game Show, NBA All-Star Game, and The Academy Awards. The campaign launched in February 2017 and can be seen on the [Adidas website](#). To our knowledge there has been no investigation into the impact of this campaign on physical activity participation among women and girls.

Fitspiration – Instagram, Snapchat etc.

Fitspiration, an adjunct of fitness and inspiration, aims to encourage others to be active through displaying positive images of a 'fit' person. This is not a specific mass media campaign, however it is a popular phenomenon on social media platforms. Public personas and/or fitness professionals share fitness videos and images of themselves being active. The content of this media is very diverse and can reach a large number of women and girls organically, without the use of paid boosts. Unfortunately though, these images are usually portraying unrealistic female bodies when can have a negative impact on mental health of viewers.

In summary, without doubt, the design and implementation of mass media campaigns aimed at enhancing physical activity and sport participation rates among women and girls has gained momentum in recent years. Whilst, the role of mass media in communicating many and varied physical activity-related messages to large audiences or to targeted segments of the community is not questioned, it is how timely to explore the extent to which such campaigns elicit actual behaviour change (65). The importance of embedding a robust evaluation framework around a mass media campaign is strongly reinforced here.

4 Next steps for NSW



The evidence included in this review is expected to develop the female lens that will be applied across the NSW Office of Sport and to inform wider ongoing policy dialogues with other NSW Government departments and external agencies. The findings may also be of wider interest to other stakeholders in the health, sport and active recreation sectors.

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Appendix 1 - Peer reviewed interventions for physical activity in girls and women


Authors, date	Aims, objectives	Methods	Results and Key learning
Allison, R et. al., 2017 (50)	To assess the impact of physical activity interventions on secondary school-aged girls (11-18 years) participation in team sport and to identify potential strategies for increasing participation.	Systematic Review searching electronic databases and grey literature in the UK. Four studies sourced from the grey literature met the inclusion criteria.	Findings suggest that physical activity interventions can encourage girls to try new sports, but evidence is limited in relation to sustained participation. Potential strategies for promoting participation included: consultation with girls, implementation of appropriate peer-leaders and friendship group strategies, early intervention and consideration of intervention setting. Physical activity interventions may have the potential to encourage girls to try team sport, but their impact on sustained participation, and subsequent physical activity outcomes, is less apparent.
Amiri Farahani, L et. al., 2015 (66)	Systematically review and assess the effectiveness of community-based physical activity interventions among women aged 18–65 years.	Systematic review. 9 articles identified.	There is a need for high-quality randomised clinical trials with adequate statistical power to determine whether multicomponent and community-based intervention programmes increase physical activity among women, as well as to determine what type of

			interventions have a more effective and sustainable impact on women's physical activity.
Cole, A.N. and Ullrich-French, S., 2017 (67) 	Explore how participation in a women's only fitness class can empower women (18-68 years old) who are victims of sexual assault	Using cross-sectional data from a larger evaluation project of Pink Gloves Boxing (PGB), several constructs (e.g., self-efficacy for exercise, empowerment in exercise, and perceptions of autonomy support) were measured to capture empowerment.	Physical activity is one setting in which women can find support for both their physical and psychological wellbeing. Using the Empowerment Process Model as a guiding framework, future research could improve the measurement of empowerment in physical activity settings.
Anderson, D. et. al., 2014 (47)	To review research on the impact of leisure-time and general physical activity levels on physical and cognitive decline in postmenopausal women.	In a systematic review of the literature, empirical literature from 2009 to 2013 is reviewed to explore the potential impact of either commencing or sustaining physical activity on older women's health.	Programs should facilitate and support women to participate in regular exercise by embedding physical activity programs in public health initiatives, by developing home-based exercise programs that require few resources. Clinicians should consider prescribing exercise in a tailored manner for older women.
Baker, A., et. al., 2016 (68)	Evaluate the efficacy of physical activity interventions among	Systematic review. 5 RCT's identified.	Physical activity interventions had a positive effect on adiposity measures and physical capacity. Future research should focus on testing the effectiveness of physical activity interventions on mental health and


	overweight and obese postmenopausal women.		incorporate strategies to maximize the health impact on the population.
Byrd, B. et. al., 2016 (69) 	To assess changes in physical self-concept over time of novice obese female runners (18-41 years old) participating in a 10-week running intervention.	Multidimensional Physical Self-Concept (PSC) was assessed at pre and post intervention times and 3 months post intervention.	A 10-week running program appeared to produce positive changes in physical self-concept. Importantly, these positive changes were sustained for 3 months past the end of the intervention. These findings suggest that women running programs may be a viable way to increase physical self-concept, and sustain such positive changes in months following.
Casey, M. M. et.al., 2017 (53) 	The perceived influence of a Healthy Welcoming Environment (HWE) on participation in sports clubs among adolescent girls, and how these perceptions changed longitudinally.	There were three longitudinal waves of data collection at 12-month intervals during Autumn months.	Many of the welcoming aspects (i.e. knowing someone at the club, friendliness of the coach, friendliness of the club) had high levels of agreement (>80.0%). Other welcoming aspects such as the day/time of competition/practice sessions (75.8%) and skills/experience of coach (67.9%) were also a positive influence. Health aspects were primarily reported as a positive influence (i.e. 'Sunsmart' sun protection practices 31.8%; responsible serving of alcohol 34.1%; smoke-free 56.0%; and injury prevention 71.0%). Very few respondents reported "negative influence", except responsible serving of alcohol (11.0%), which was important in regional areas.


<p>Casey, M. M., et al 2011 (70)</p> 	<p>To investigate the effect of a newly designed school-community links program (Triple G) on the PA level and wellbeing of adolescent girls</p>	<p>Cluster-randomised controlled trial. The Triple G (Girls Get Going) program consists of school-based components focused on enjoyment and “game sense” pedagogical principles, followed by club/centre-based components. Each school-based component consists of six lessons jointly taught by teachers, coaches and/or representatives of community clubs/centres. Each student was exposed to non-competitive active recreation and either tennis or football. Students also complete self-management activities targeting cognitive and behavioural skills.</p>	<p>There were no significant differences for any PA measure. Intervention completers had significantly higher scores than non-completers and controls for some mediator variables (e.g. self-efficacy, behavioural control). Positive outcomes were achieved from a modest school-community linked intervention. The school component contributed to maintaining Health Related Quality fo Life; students who completed the community component derived a range of intra-personal and inter-personal benefits.</p>
<p>Casey, M. M., et al, 2014 (71)</p> 	<p>To undertake a process evaluation to examine the reach, adoption and implementation of a school-community linked physical activity program (Triple G) for girls aged 12 – 15 years using the RE-AIM framework.</p>	<p>Various approaches were used: (a) a school environment survey of intervention schools; (b) teacher feedback regarding the professional development component and lesson implementation; and (c) post-intervention focus group interviews with physical education teachers, students, coaches and instructors regarding program experiences.</p>	<p>Some aspects were not implemented as intended, which may have affected the likelihood of achieving further positive outcomes. Barriers to program implementation should be considered when designing school-community linked interventions. In particular, future programs should seek to assess and adjust for organizational readiness within the study design.</p>

<p>Wegner, C.E. et al 2016 (72)</p>	<p>Investigate the creation of an identity for Black female runners through their psychological and behavioral involvement in a national running organization for Black women.</p>	<p>The mission of Black Girls RUN! is to encourage ALL (especially African-American women) to make fitness and healthy living a priority. A repeated measures design was used with 756 members, surveying them twice over a 14-month period regarding their involvement both with the organization and with the activity of running.</p>	<p>African American women's psychological and behavioral involvement with running increased over time, and that this change was more salient for members who did not consider themselves runners before they joined the organization.</p>
<p>Cleland, V. et.al., 2013 (48)</p> 	<p>To determine the effectiveness of interventions to increase physical activity among women experiencing disadvantage (19-64 years old), and the intervention factors associated with effectiveness.</p>	<p>Systematic review and meta-analysis of studies of interventions to increase physical activity in women experiencing socioeconomic disadvantage. Thirteen studies employed at least one theoretical framework, with the most common being the trans-theoretical model of behaviour change (n = 4 studies) and social cognitive theory (n = 6 studies). Physical activity was most commonly measured via self-report (n = 16 studies).</p>	<p>The findings clearly demonstrate the importance of group-based programs to promote physical activity among women experiencing socioeconomic disadvantage. Social support can be operationalized in a number of ways, including instrumental support (e.g. assistance with transportation), informational (e.g. sharing of educational resources), emotional (e.g. asking how a physical activity schedule or program is going) or appraisal (e.g. encouraging or reinforcing activity). Social support from family and friends was a key independent predictor of physical activity among women experiencing socioeconomic disadvantage.</p>
<p>Bean, C. et al., 2016</p>	<p>To understand female youths' (11-16 years old)</p>	<p>The Girls Just Wanna Have Fun (GJWHF) program integrated the five levels of the</p>	<p>Results indicated that youth learned intrapersonal (i.e., emotional regulation, focus, goal setting), interpersonal</p>

<p>(73)</p> 	<p>from low income families perceptions of life skills transfer from participation in a physical activity-based life skills program.</p>	<p>Teaching Personal and Social Responsibility model. The objectives of GJWHF were to (a) provide physical activity opportunities, (b) facilitate life skill development, and (c) enable opportunities for youth. The GJWHF program incorporates the facilitation of meaningful youth involvement, providing youth with choice and opportunities to plan.</p>	<p>(i.e., respect, responsibility, social skills), and physical activity skills and applied these skills in other life domains.</p>
<p>Camacho-Miñano, M.J. et al., 2011 (74)</p>	<p>To describe the available evidence from physical activity (PA) interventions that targeted girls aged 5–18 years and to determine their effectiveness and key characteristics of success.</p>	<p>A total of 29 articles were reviewed, describing the evaluation of 21 interventions. Ten studies reported a favorable intervention effect upon PA outcomes, seven of which were rated as having a high methodological quality.</p>	<p>The most effective interventions to increase PA among girls (5–18 years) appeared to be those that were school-based, with an enjoyable PE being one of their main components, and that addressed multiple levels of influence on behavior using a socioecological framework. Although our review points out that family support strategies are ineffective, it seems promising to promote positive peer relationships and social support of friendship groups in PA setting.</p> <p>There is a lack of studies tailoring different subgroups of girls (i.e. young girls and ethnic minority population); implementation of peer-leaders and friendship groups strategies; community-based interventions; replication of successful programs in other sociocultural contexts</p>



			and the need to improve methodological quality as well as report on the studies.
Cortsen, K 2017 (75)	To investigate how a new sports product, i.e. a new football (soccer ball) and its interaction with participation numbers concerning women's football in Denmark.	This new ball, which has a smaller circumference and a lower weight, was invented to produce changes to the game of women's football due to the fact that this new ball can be kicked 3–4 m longer. Other studies point to the fact that to encourage sports participation, football players must be able to perform to the best of their abilities.	Given the positive participation numbers in relation to women's football in Denmark over the past couple of decades, the invention of 'Sensational 1' suggests a way to create a new and brighter future for all stakeholders in the sport of women's football. In combination with game modification, a 're-brand' of the sport as an activity, in which it is not only fun to participate but also a sport that is appealing to stakeholders.
McGhee et. al., 2010 (58)	To determine the best method for women to independently choose a well-fitted bra, as ill fitting bras and insufficient breast support can lead to the development of musculoskeletal pain and inhibit womens physical activity	A cross-sectional study	The participants' ability to independently choose a well-fitted bra was poor, and did not improve by trying on several bras, increased bra choice or use of bra sizing measurement systems. Education of women by medical practitioners and allied health professionals during routine consultations of professional bra fitting criteria may improve the ability of women to independently choose a well-fitted bra. This in turn, could assist in the promotion of physical activity.



<p>Dewar, DL et. al., 2014 (76)</p> 	<p>To evaluate the impact of a 12-month school-based multi-component program on adolescent girls' (13 years old) physical activity and sedentary behaviors, and hypothesized mediators of physical activity behavior change.</p>	<p>Group randomized controlled trial with 12-month follow-up.</p> <p>The intervention included enhanced school sport, lunchtime physical activity sessions, interactive seminars, student handbooks, nutrition workshops, pedometers, parent newsletters and text messages to encourage physical activity and healthy eating, and a decrease in sedentary behavior.</p>	<ul style="list-style-type: none"> - Interventions targeting adolescent girls may require additional environmental changes to support health behavior change. - Behavioral interventions such as the NEAT Girls program may be more effective in reducing sedentary behavior than increasing physical activity. - Future interventions are encouraged to examine more specific hypothesized mediators of physical activity and explore mediators of sedentary behavior. - Strategies to improve intervention fidelity, such as comprehensive professional development for teachers may improve the effects of school-based interventions.
<p>Donnelly, P et al., 2016 (7)</p>	<p>Investigate opportunities to advance women and girls participation in sport</p>	<p>Report with three main objectives:</p> <ol style="list-style-type: none"> 1. Establish a current understanding of participation rates 2. determine the major barriers to women and girls participation 3. Where available, identify success factors or best practices that have been used to increase women and girls participation and development in sport. 	<p>Recommendations are offered in 5 areas. Participation; Barriers; Best practices; Leadership; and safety.</p>


<p>Dudley, D et. al., 2010 (77)</p> 	<p>To determine the feasibility, acceptability, and potential efficacy of a school-based physical activity program delivered during school sport time among adolescent girls (15 years old) from low income predominately linguistically diverse backgrounds.</p>	<p>A 3-month 2-arm parallel-group pilot randomised controlled trial in a single-sex (girls) secondary school situated in south-west Sydney.</p> <p>The intervention was implemented during school sport over the course of an 11-week school term.</p>	<ul style="list-style-type: none"> - NSW School Sport programs are ideal settings for interventions looking at improving physical activity, enjoyment of physical activity, social support of physical activity and physical self-perception in adolescent girls for linguistically diverse and low SES backgrounds. - Students should be involved in the programming of their school sport programs. - Teachers should be encouraged to participate in school sport with their students.
<p>Elbe, A-M et. al., 2015 (78)</p>	<p>To explore healthcare workers' (25-65 years old) flow experiences during a workplace exercise intervention</p>	<p>A workplace-based 12-week football (team sport) or Zumba (group activity) exercise intervention, where exercise took place outside of work hours.</p>	<p>The results indicate that female healthcare workers participating in a physical activity intervention can experience medium levels of flow in both a football and Zumba activity. The flow values measured in this study, however, are visibly lower than flow values experienced in a non-workplace physical activity intervention. 27 participants voluntarily chose to continue regular physical activity after the end of the intervention and were still active 18 weeks after the end of the intervention.</p>



<p>Enright, E et. al., 2010 (51)</p> 	<p>To understand and transform young adults' (15-19 years old) self-identified barriers to physical education engagement and participation</p>	<p>Participatory Action Research project to negotiate the school curriculum</p>	<p>When provided with guidance and encouragement, rose to the challenge and took ownership of their learning, and doing so was a positive, energizing and exciting experience for them and one in which deep learning occurred and deep insights were produced.</p>
<p>Evans, A.B. and Allen-Collinson, J., 2013 (79)</p>	<p>Investigate how women with children under the age of 3 years old, experience aquatic leisure activity.</p>	<p>Children's Centres are UK government-funded schemes designed to offer young families residing in socially deprived areas the opportunity to participate in community-based activities such as play sessions, educational sessions or social events. Interview participants were current swimmers recruited from these centres.</p>	<p>Pre-family, their main focus was on maintaining a body which looked appealing in swimming attire. Whilst women noted their discomfort when male and/or younger bodies were present, most considered aquatic activity, and particularly aqua aerobics, to be more appropriate for older, overweight or pregnant female bodies. When in the pool alone or with other adults, participants' attention was focused upon management of internal feelings. If their child was present, focus was on discipline.</p>
<p>Gatz, J and Kelly, A.M., 2017 (80)</p>	<p>Evaluate the effect of a 'Transformation through Triathlon' after school programme in promoting health status, academic</p>	<p>20-week after school triathlon training and health promotion programme. A phenomenological approach was employed with elements of grounded theory to analyse</p>	<p>Intervention participants learned to self-regulate their learning and set goals that promoted fitness, academic achievement, better attitudes, and resilience. After school community and family inclusive programmes with a structured fitness component increase</p>

	motivation development in at-risk girls aged 11–14 years attending middle school in the USA	data from focus group interviews for insights into programmatic outcomes.	confidence, self-determination and academic achievement through social support structures.
Hanlon, C., Morris, T., Nabbs, S., 2010 (20)	To determine what attracted and sustained women to participate in physical activity programs	Inductive content analysis was performed on the data generated by the focus group sessions with program managers from eight targeted physical activity programs for women.	The most frequent participant responses related to the social aspects of the exercise environment. Women in the focus groups valued instructor professionalism and instructors' technical knowledge, however, it was their awareness and sensitivity that participants appreciated most.
Harrison, A.L et. al., 2018 (81)	To determine the attitudes, barriers and enablers to physical activity perceived by pregnant women.	Systematic literature review. Forty-nine articles reporting data from 47 studies.	Pregnant women believe that physical activity in pregnancy is important and beneficial. Selection of optimal behaviour change techniques (eg, goal setting, education) and person-centred strategies able to respond to intrapersonal and social factors are needed to translate the positive attitude of pregnant women into increased physical activity participation.
Hauff, C., 2016 (57)	Perceptions of exercise appeal through the eyes of active women	Qualitative exploration of women's thoughts and feelings regarding exercise apparel as a motivator or deterrent for physical activity.	Two higher order themes emerged: exercise apparel as a tool for the optimal exercise experience (lower order themes: comfort, functionality of clothing, and reciprocal relationship between motivation and affect) and societal influences shaping exercise apparel choices

			(lower order themes: social influence and social comparison within the exercise setting, the cultural standard, and past experiences of evaluation).
Hsu, Y.T. et al., 2013 (82) 	To examine feasibility, acceptability of a Self-Determination Theory-based intervention with a Healthy at Every Size orientation for sedentary overweight/obese women	Project CHANGE was an 8-week randomized controlled trial with follow-up at 4-week. Intervention group received exercise training and a weekly behavioral intervention while the comparison group received only traditional supervised exercise training.	The 8-week Self-Determination Theory-based intervention promoting Healthy at Every Size is feasible and acceptable and may result in better exercise adherence and improvements in motivational variables relative to traditional supervised exercise.
Huberty, JL et al., 2014 (83) 	To evaluate the effectiveness of the GoGirlGO! (GGG) curricula to improve PA, and self-efficacy for and enjoyment of PA in elementary aged girls (5-13 years old).	GGG one day a week for one hour. Each class focused on a specific developmentally appropriate life skills topic (e.g., bullying, body image). Thirty minutes of class consisted of reading stories about a champion female athlete or peer role model who had personally experienced the life skills topic (i.e., being bullied) and group discussion related to that topic. The remaining 30 minutes was spent participating in PA intended to reinforce the topic covered that day.	Across all age groups there was a statistically significant increase in PA. Overall, on days GGG was offered girls accumulated an average of 11 minutes of moderate-to-vigorous PA compared to 8 minutes during non-GGG days. However, GGG curricula improvements are warranted. Future GGG programming should explore offering GGG every day, modifying activities so that they are moderate-to-vigorous in intensity, and providing additional trainings that allow staff to better implement PA and improve behavior management techniques.


<p>Andruschko, J et al., 2010 (84)</p> 	<p>To assess the feasibility, acceptability and potential efficacy of a school-based physical activity program for adolescent girls (12-14 years old)</p>	<p>Sport 4 Fun. The intervention consisted of one 90-min physical activity session, in scheduled school sport time; three 15-min theory sessions in allocated homeroom (roll call) time and one 60-min after-school physical activity session per week.</p>	<p>This study showed promising results in anthropometry outcomes to justify the feasibility and acceptability of such a school-based intervention program to promote physical activity in adolescent girls. The results for enjoyment of physical activity and perceived physical competence were negative, maybe due to methodological limitations with the instruments among the younger girls.</p>
<p>Okley, A. et al., 2017 (85)</p> 	<p>To report the outcomes from a multi-component school-based intervention (Girls in Sport), focused on promoting physical activity among adolescent girls (13 years old).</p>	<p>Using a Health Promoting Schools and Action Learning Frameworks, each school formed a committee and developed an action plan for promoting physical activity among Grade 8 girls. The action plan incorporated strategies in three main areas – i) the formal curriculum, ii) school environment, and iii) home/school/community links – based on the results of formative data from target girls and staff and on individual needs of the school.</p>	<p>The Girls in Sport intervention was not effective in reducing the decline in physical activity among adolescent girls. Lack of implementation by most intervention schools was the main reason for a null effect. Identifying strategies to enhance implementation levels is critical to determining the true potential of this intervention approach.</p>
<p>Stronach, M et al., 2015 (86)</p>	<p>Discussed the life experiences and the place of sport and physical</p>	<p>The research was guided by a culturally appropriate interpretative qualitative methodology.</p>	<p>Sport and physical activity were seen to provide women with opportunities to maintain strong communities, preserve culture, and develop distinct identities as ‘enablers’. The women called for culturally safe spaces</p>

	activity with Indigenous women.		in which to engage in PA and noted the need for Indigenous females to act as role models.
Lindgren, E et al., 2011 (87) 	The Halland District Sport Federation in Sweden implemented a six-month, voluntary exercise intervention programme (EIP) for non-physically active adolescent girls.	Sports and exercise activities were offered twice weekly, for girls to master activities they selected without feeling ashamed of their body or level of ability. The physical activities were structured to emphasize learning new skills, mastery and enjoyment, rather than focusing on physiological change, performance, competition or seriousness found in typical sport-club settings.	The EIP had an impact on adolescent girls' general perceived self-efficacy and can be regarded as an outcome of empowerment that indicates the development of the adolescent girls' ability to effectively deal with a variety of stressful situations in general.
Maxwell, H et al., 2015 (54)	Example Royal Life Saving Society of Australia as an organisation that embraced cultural change and developed a strategic approach to inclusive provision for individuals from marginalised population groups	Case study on the development of female Muslim lifesavers.	The case is based on a community development framework that includes multiple facets: a shared concern about a social problem requiring action; encouraging the active participation of a marginalised group; forming public sector partnerships to pool resources and build political support; adopting collaborative principles of organising; collectively developing and implementing action plans; and re-conceptualising traditional ideas around accountability.
Miller, A et al., 2016	To evaluate whether exposing junior netball	A group-randomised controlled trial in one junior netball club. The Professional Learning	An intervention exposing athletes to greater levels of playing form activity, delivered via a coach education

<p>(88)</p> 	<p>players (8-12 years old) to greater amounts of competition relevant activity had an effect on game play outcomes and session involvement.</p>	<p>for Understanding Games Education into Sport (PLUNGE into Sport) programme was undertaken in the first half of nine training sessions (9 × 30 min).</p>	<p>programme, was efficacious in improving athlete decision-making and support skills in game play and increasing athlete involvement during sessions.</p>
<p>Morgan, P et. al., 2015</p> <p>(89)</p> 	<p>To develop and evaluate a program targeting fathers and their daughters to improve: (i) daughter/father PA and (ii) daughter social and emotional wellbeing.</p>	<p>The DADEE (Dads And Daughters Exercising and Empowered) RCT. The 8-week intervention included weekly sessions that developed the daughters' social and emotional wellbeing skills (e.g. self-control, resilience) using physical activity. A supplementary home-based program was provided to motivate daughters to practice social and emotional wellbeing skills challenges with Dad to earn 'EmPower' cards.</p>	<p>This study demonstrated the strong feasibility and positive impact of a PA program specifically targeting fathers and daughters. DADEE improved father/daughter PA levels, co-PA, PA parenting practices, father–daughter relationship quality, and daughter social and emotional wellbeing.</p>
<p>Mulgrew, KE et. al., 2018</p> <p>(61)</p>	<p>Assess the effectiveness of exposure to two functionality-focused media campaigns, This Girl Can (TGC) and #jointhemovement, in</p>	<p>Investigated (a) the impact of exposure on immediate physical functionality and appearance satisfaction, and intentions to exercise; and (b) whether these outcomes offered any protective benefits for women</p>	<p>Collectively, results show that the two recent media campaigns with a focus on physical functionality, This Girl Can and #jointhemovement, can produce immediate benefits in young women's appearance satisfaction and intention to exercise, however these results were not maintained when exposed to a body</p>

	improving state appearance and physical functionality satisfaction, exercise intent, and protecting against exposure to idealised imagery.	when faced with a body image ‘threat’ in the form of idealised imagery.	image ‘threat’ in the form of idealised images of models. Further, they did not help to mitigate negative social comparison processes. It is likely that a brief media campaign was not sufficient and women will need greater assistance in overcoming a lifetime’s worth of exposure to idealised imagery in the media.
Williams, N et al., 2011 (90)	To better understand female retention via the identification of mechanisms that contributed to feelings of relatedness support during adolescence and early adulthood.	Parent-, peer- and coach-related issues featured as important sources of relatedness support. Golf clubs were also discussed as a contributor to establishing relatedness support, both in terms of their social and structural elements, and it was interesting that a non-living entity appeared to be able to partly satisfy individuals’ perceptions of relatedness support.	Retention of female golfers may be facilitated through promoting valued relationships with parents, peers, coaches, and golf clubs. Policies that decrease the perceived marginalization of female participants may also be perceived as a form of relatedness support and may promote retention within this cohort. Participants in this study that expressed a sense of belonging and connectedness to their club appeared to be more likely to remain involved in golf.
Neumark-Sztainer, 2010 (91)	To evaluate New Moves, a school-based program aimed at preventing weight-related problems in adolescent girls (13-18 years old).	School-based group-randomized controlled design. Whole of school intervention targeted at girls. BeFit classes available in their community (dance, hip hop, kick boxing), with a focus on Fun.	New Moves did not lead to significant changes in the girls' percentage body fat or BMI but improvements were seen for sedentary activity, eating patterns, unhealthy weight control behaviors, and body/self-image.

<p>Domene P.A et al., 2016 (92)</p>	<p>To gain a holistic understanding of the efficacy of Zumba® fitness in a community-recruited cohort of overweight and physically inactive women by evaluating</p>	<p>Participants were randomly assigned to either engagement in one to two 1 h classes of Zumba® fitness weekly or maintenance of habitual.</p>	<p>Large magnitude enhancements were observed in the HRQoL factors of physical functioning, general health, energy/fatigue and emotional well-being. When interpreted in a community-based physical activity and psychosocial health promotion context, our data suggest that Zumba® fitness is indeed an efficacious health-enhancing activity for adults.</p>
<p>Riggs, W et. al., 2016 (93)</p>	<p>To review the literature on best practices in marketing to women, and evaluate different bicycle marketing guides.</p>	<p>Data indicates that only a small number of cyclists are women. This paper addresses that gender gap with an eye toward the marketing strategy known as transportation demand management. This provides lessons for communities looking to encourage greater levels of bicycle riding.</p>	<p>Only 15% of the marketing guides are targeted to women. The lessons learned from our study provide information for the design of future bicycle guides that will appeal to women consumers.</p>
<p>Skidmore B.L et. al., 2016 (94)</p>	<p>To determine the effectiveness of an exercise intervention for increasing activity levels and perceived social support for exercise among mothers of young children.</p>	<p>A treatment group participated in an instructor-led “Squat-n-Swap” exercise program once per week for four weeks, followed by four weeks without instructor supervision.</p>	<p>Results showed positive changes in women’s perceptions of changes in their physical activity levels. Significant interactions for support in the forms of childcare, information, companionship, and validation were also seen. The “Squat-N-Swap” model might be a useful option for mothers of young children who would benefit from social support to exercise</p>

<p>Veldman, SLC et al., 2017 (95)</p> 	<p>To examine the immediate and long-term effects of a ball skill intervention on preschool-age girls' ball skill performance.</p>	<p>Randomized controlled trial. A high autonomy, mastery-based 9-week motor skill intervention (the Children's Health Activity Motor Program; CHAMP)</p>	<p>This study demonstrates the positive effects of a ball skill intervention (i.e., CHAMP) on improving girls' ball skills both short- and long-term. Findings suggest that early childhood interventions that focus on the development of ball skills in young girls might be an avenue to improve girls' ball skill performance</p>
<p>Voskuil, VR et al., 2017 (96)</p>	<p>To evaluate the evidence for Physical Activity (PA) intervention effects on accelerometer-measured PA, body mass index (BMI), and percent body fat (% BF) among girls.</p>	<p>Fifteen studies were reviewed. PA, BMI, and % BF were measured in 5, 15, and 10 studies, respectively.</p>	<p>Overall, the evidence for PA interventions to increase objectively measured PA and lower BMI among school-aged girls was not well supported. Although PA interventions were more likely to lower % BF, the majority of interventions that decreased % BF did not include follow-up measurement after the intervention, and thus results should be interpreted with caution. Inclusion of follow-up measures to demonstrate sustained PA intervention effects over time can aid in effective translation.</p>


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Appendix 2 – Promising interventions and programs

Area/region , name of program, dates	Aims, objectives	Governance lead and partners	Funding	Success Metrics	Results and Key learning
NSW, GoActive Project (56)	Provide young women who follow the Islamic faith living across Western and South Western Sydney with opportunities to be involved in sport and recreation.	Lebanese Muslim's Association GoActive Healthy Women	Grant funded	NA	NA
VIC, Changing the Game: Increasing Female Participation in Sport program	Getting Victorian females who are inactive and somewhat active to become active more regularly through sport. Raise the profile of female sport and be a champion for female sport and health on a large scale.	VicHealth	\$1.2 million	Objectives include: 1. Drive Commitment through an Ambassador Program 2. Engage and Empower by Connecting Ambassadors to Women and Girls 3. Mandate Gender Balance and Good Governance Principles	Six funded programs delivered by sport and rec organisations adapted for women and girls: AFL Active Coasting Get Into Cardio Tennis Move My Way


(18)	Changing the Game is part of VicHealth's long-term plan to get more Victorians living healthier and happier lives.			<p>4. Reform Recruitment Practices and Processes for Leadership Positions</p> <p>5. Enhance Participation Choice and Improve How Opportunities are Marketed</p> <p>6. Deliver Female Friendly Built Environments and Equitable Facility Usage Policies</p> <p>7. Build an Enabling Environment through Education and Training</p> <p>8. Showcase the Pathways and Opportunities through Role Models</p> <p>9. Increase the Profile of Women in the Sports Media</p>	<p>Rock Up Netball</p> <p>Social Spin</p>
NSW, Girls Get Active,	Exposing young girls (12-16 years) to high achieving sportswomen and new sports	Run by Sport NSW, currently no	Nil specifically for this program.	Girls who have participated in the program continuing their	Surveys administered to the participants show that the girls have been inspired by the high achieving sportswomen and by

2016 onwards	with a view to inspiring them to participate.	external partners.	Sport NSW receive \$250,000 per annum from Office of Sport.	participation in sport or taking up a new sport.	having the opportunity to try new sports. Anecdotally, this has led to girls seeking out participation opportunities.
Heart Foundation, Gear up girl (97)	Encouraging Australian women and girls (16+ years old) to get on their bikes and be more active.	Heart Foundation and Bicycle NSW Central Coast Bicycle User group	Entry fees and sponsors	- number of registered women and girls	NA
QLD, Get out, Get Active (98)	The objectives of Get Out, Get Active are to: - provide enjoyable, accessible and affordable activities aimed at increasing sport and active recreation participation of inactive women and girls	QLD Government and the Office of the Commonwealth Games	One-off funding of up to \$40,000 to deliver initiatives that clearly align to the	- Number of councils delivering program	NA

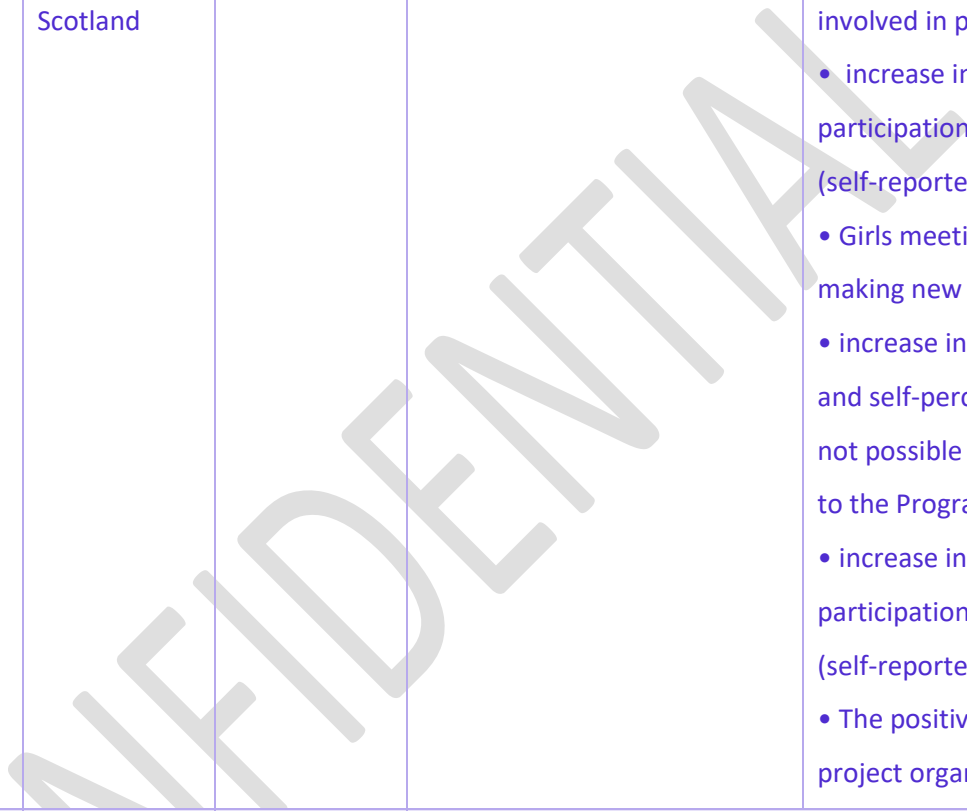
	<ul style="list-style-type: none"> - facilitate sport and active recreation projects that encourage innovation and partnerships that meet the needs of inactive women and girls - improve the sport and active recreation experiences of women and girls to encourage a culture of life-long participation. 	Councils and NFP sport and active recreation organisations	Get Out, Get Active objectives		
QLD, Women and Girls checklist (52) 	The checklist and supporting resources aim to positively influence female participation through best practice female-friendly strategies for places and spaces, programs and services, and organisational practices.	Queensland government	Start playing, Stay playing, QLD Gov	NA	NA
QLD, Girls, get Active (99)	Girls, Get Active! program offers a range of free and low cost, enjoyable physical activities for girls and women in the City of Logan. Various activities and	Logan City Council, QLD Government Logan sport and active	Get Out get Active Grants	<ul style="list-style-type: none"> - Number of activities offered and run - Number of registered participants 	NA

	programs on offer including Yoga, Skateboarding, Soccer, Mums'n'Bubs Yoga and Free-Movement Dance classes.	recreation providers			
Women in Sport	Feature women's sporting content in each magazine, run programs and host exciting events, including our nationally recognised annual awards ceremony.	Women's Health Magazine	Industry	<ul style="list-style-type: none"> - Magazine sales - Representation of women in sport in the magazine - Event attendance and publicity reach 	NA
Travel Play Live Women's Adventure Grant	Showcase the power of adventure to affect change	Travel Play Live – Women's Adventure Magazine and industry partners	\$5000 grant program	<ul style="list-style-type: none"> -Media reach - Magazine subscriptions 	NA

Miss Muddy	5k female fun run with colour, foam, inflatables, music, obstacles and plenty of mud. Designed to suit all fitness levels for participants aged 13+, Miss Muddy is untimed and non-competitive with a focus on fun and inclusion rather than Tough and intimidating.	Miss Muddy Athletics Australia, Lorna Jane	Entry fees.	- Number of events - number of women who register	Over 20 Miss Muddy events
#TeamGirls	Encouraging girls to participate in sports and build each other up.	Suncorp, netball Australia Reach Out	Suncorp	- Number of programs per year - Number of girls attending	NA
#RoxyFitness	A mass participation event for women join a community of women and participate in running, stand-up paddle boarding and yoga together.	Roxy	Roxy	- Number of women who register - Social media reach	The #ROXYFITNESS movement boasts over 16000 participants in 18 countries – a global community of girls coming together to exercise their right to have fun.
Stars Foundation	To support and enable Aboriginal and Torres Strait Islander girls and young women to make active choices towards	Stars foundation	Northern Territory Government and	Participant’s completion of Year 12 and successful transition into a sustainable career.	We also look to see young women completing school who are well-rounded, confident, prepared for their future post-school with a

	realizing their full potential in all aspects of their development and wellbeing.		individual, philanthropic and corporate supporters from the private sector.		broad range of life skills and a healthy approach to living
Goal Program (100) 	Goal is an 10 month development programme which uses sport and life skills education to transform the lives of adolescent girls aged 12-18 who are living in underserved communities.	Women Win has partnered with Standard Chartered to bring Goal to scale and increase sport and empowerment opportunities for girls	Philanthropically supported	Goal is typically offered on a weekly basis, over the course of ten months. The programme is divided into four modules focused on one of four key life skills: communication, health and hygiene, rights and financial literacy.	In 2011, Goal was implemented in five countries – China, India, Jordan, Nigeria and, Zambia– and reached over 18,500 girls. In 2015, Goal reached 71,205 girls in 25 countries. Through community investment and collaboration, we are on track to achieve our target of delivering Goal to 500,000 girls by 2018.

		around the world.			
UK, Engage-HER (101)	To build on the expert knowledge Sported members (community sport and youth groups) hold in engaging disadvantaged young people through sport and physical activity, by offering them the opportunity to improve their insight on how to specifically engage women and girls more effectively.	Sported and Women in Sport Sport Northern Ireland Department of Communities		Sported Capacity Model, indicators for: - Being embedded in the community - Ability to deliver -mission and structure in approach - sound finances - relevant skills and knowledge	NA
UK, Girls on the Move (102,103)	Girls on the Move includes a participation program that provides grants to community groups to allow them to deliver physical activities requested by girls aged 11 to 18 years and a leadership program that provides opportunities for young women (16 to 25 years)	Youth Scotland, the Scottish Sports Association, Sports Leaders UK and NHS	The Robertson Trust and the Scottish Government (£450,000 over three years)	Quantitative: - surveys - attendance sheets Qualitative: - observation - interviews - group discussions	The 'Girls on the Move' Programme addresses its main aim to provide opportunities and choices for girls to engage in physical activity. This is demonstrated by: • Girls' involvement in designing the content of projects; • The provision of activities specifically for girls;



	to attend 4–5-day leadership courses leading to nationally recognised leadership certificates.	Health Scotland			<ul style="list-style-type: none"> • positive responses to being involved in physical activities; • increase in frequency of participation in physical activities (self-reported); • Girls meeting new people and making new friends; • increase in self-esteem and self-perception (although it is not possible to attribute this only to the Programme); and • increase in frequency of participation in physical activities (self-reported); • The positive testimonies of project organisers.
UK, Girls Active (104,105)	Girls aged 11-14 year olds, are involved in developing the sport. They shape the project and create a brand unique to their school. Girls Active develops girls leadership and marketing	Sport England, Schools	Sport England, National Lottery	A significant difference in mean minutes of moderate to vigorous activity between the intervention and the control group, measured by accelerometer at 14 months after baseline assessment. Secondary outcome measures at 7 and 14 months after baseline assessment:	

	skills to encourage others to be physically active.			<ul style="list-style-type: none"> • Increase in objectively measured total volume of physical activity (accelerometer counts/days) • Increase in the proportion of girls meeting MVPA guidelines (objectively measured) • Increase in objectively measured MVPA at 7 months • Reduction in time spent sedentary (objectively measured and self-reported) • Reduction in measures of adiposity (body mass index, percentile, percent body fat) • Improvement in psychological factors that may mediate physical activity participation • A full cost effectiveness and cost-consequence analysis of the 'Girls Active' programme (Child Health Utility 9D (CHU-9D) • A process evaluation of intervention implementation <p>Self report: Physical Activity Questionnaire for Adolescents (PAQ-A) 7-day recall; Adolescent Sedentary Activity Questionnaire (ASAQ). Psychosocial measures</p>	
UK, I will if you will (106)	It trialled a range of different activities for different target groups.	Bury Council, with local businesses, national governing	Sport England, National Lottery	NA	NA

		bodies of sport, community groups, social organisations and volunteer champions.			
UK, Fit for girls (107)	To promote physical activity among girls aged 11-16 years. It is specifically aimed at girls who are least likely to be active, who are not currently active in the extra-curricular setting and who may opt out of curricular physical education (PE)	Sport Scotland	Youth Sport trust	Quantitative: - a national survey of a cohort of girls pre and post intervention - an online survey of PE staff and Active Schools coordinators in years two and three of the programme Qualitative: - focus group discussions with disengaged girls - focus group discussions with PE staff in four case study schools	Girls say they enjoy physical activity a lot or a little and would like to be more active. Being healthy and having fun were more common reasons for taking part in physical activity than losing weight or looking better. However, there appears to be a discrepancy between attitudes towards physical activity and actual behaviour. Almost half of girls did not take part in any extracurricular school-based activities and only 13.2% of girls said that they took part in at

				- in-depth interviews with local and national stakeholders.	least 60 minutes of physical activity every day during the previous week.
Uk, US Girls, Streetgames (108)	To increase and sustain young women's participation in sport and physical activity within some of the nation's most disadvantaged communities.	Street Games Sport England	£2.3 million of National Lottery	The research included interviews and focus groups. US Girls assessed - Number of Participants - Number of regular (1 or 2 times a week) participants - Number of new activities the project will deliver - Number of activity sessions - Number of New Coaches/Leaders - Number of New Volunteers	At the right time of life. At the right time of day. Us Girls is at the right place. Us Girls is at the right price. Us Girls is all about fun, fitness, music and friendship

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Appendix 3 – Detail on NSW AusPlay analysis methods

Weights

Except for the demographics (table 1), all estimates and figures were calculated from the data using normalised weights. To obtain population estimates from the data, weights were calculated for everyone by the *Clearinghouse for Sport*. Details of these calculations can be found in their [methodology report](#). For our purposes, these weights were normalised for each quarter using the following

$$n_i = \frac{w_i}{\bar{w}}$$

where n_i and w_i are the normalised and raw weights of person i respectively and \bar{w} is the mean raw weight.

Average weekly duration

Average weekly duration of participation (mins) was calculated by multiplying the yearly frequency of participation by the length of the last session, and then summing the yearly duration over all activities nominated by each individual and dividing by 52. That is

$$\text{Weekly duration}_i = \frac{\sum_{j \in \text{activities}_i} \text{frequency}_j * \text{duration}_j}{52}$$

where activities_i is the set of all activities reported by each individual i .

Total annual cost of participation

Annual cost was reported for all activities separately or, where that was not possible, as a total for a group of activities (package). The total annual cost for each child is the sum of all packages and costs of individual activities. Where the respondent gave the same dollar value for the cost of the package for two activities separately, these were assumed to refer to each other and were only counted once.

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