

and medicine staff) at a national sporting institute. Transcripts were analysed for emergent themes using sound qualitative methods.

Results and discussion: The variety of perceived benefits and outcomes of ASRM use reflected a general uncertainty amongst stakeholders. ASRM were generally perceived to be implemented to measure athlete responses to training load (emphasised by coaches), and enable training modification (athletes). In comparison, sport science and medicine staff viewed the benefits more holistically with identification of red-flag responses, to ultimately prevent undesired outcomes. Other potential outcomes identified included facilitating athlete self-management and the use of longitudinal data sets to improve knowledge and future practice. However current ASRM outcomes appeared to deviate from these perceived benefits, with the most significant outcome identified being the role of the ASRM in initiating targeted conversation between athletes and staff (all stakeholders). Such conversation helps build inter-personal relationships as well as providing staff with context to any potential issues prior to any action. Communication was also facilitated amongst the multidisciplinary team, keeping staff in the loop and encouraging improved coordination.

Conclusion: While key stakeholders understood the theoretical benefits of ASRM, their full potential may not be currently realised. Possibly due to lack of understanding of the cyclic monitoring process among those involved in athlete preparation, or the rationale for the implementation of the ASRM. The findings of the current study demonstrate that ASRM are primarily used to encourage communication amongst stakeholders, which lends to a shift in perceptions of the role which ASRM may play in athletic preparation.

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Development and validation of the Perceived Social Influences in Sport Scale-2 (PSISS-2): A cross cultural study



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Introduction: Participation in youth sport is suggested to be a significant predictor of physical activity and health in later life. A growing body of research identifies influential roles for coaches, parents and peers in influencing the children's enjoyment and participation in sport. Current questionnaires for assessing perceptions of social influence on motivation are either exclusive to a single social agent – preventing comparison of relative effects – or they require researchers to explicitly accept/endorse a guiding theory prior to data collection – limiting the scope for new and novel findings. In order to effectively measure, quantify and compare the roles of significant others, the present study set out to develop and validate the Perceived Social Influences in Sport Scale-2 (PSISS-2) – measuring perceptions of praise/positive-reinforcement, punishment/criticism, affiliation/closeness, and conflict/dysfunction – with each social agent.

Methodology: In collaboration with experts in this area ($n = 10$), 49 items were generated by drawing from recent qualitative studies in youth sport. Content validity as-well-as reading-age appropriacy were assessed by an expert panel, before two separate samples of youth athletes were recruited from China ($n = 191$) and the UK ($n = 187$) respectively, for the completion of PSISS-2 and items measuring intrinsic motivation, competence, and competitive anxiety.

Results: From exploratory and confirmatory factor analyses, a three-factor model emerged demonstrating satisfactory factorial

validity and predictive validity with regard to intrinsic motivation, perceived competence, and competitive anxiety. The relative social influences of coaches, parents, and peers were moderated by athletes' age and gender.

Conclusion: The PSISS-2 appears to be a relatively reliable and theory-neutral tool for assessing children's perceptions of the influences exerted by key social agents in sport. The findings of this study are reconcilable with existing research, but also suggest new directions and opportunities for progress in this area, for example by allowing researchers to compare the relative effects of coaches, parents and peers. The limitations of the questionnaire design process and reflections on the way that factorial structures are determined are also offered as a point of discussion.

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A qualitative exploration of social motivational influences in determining the physical activity of 30–60 year old adults



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Introduction: Adults over 60–65 years old are a group considered vulnerable to the risks of sedentary lifestyle causing decreased quality of life and poor health. Australian government figures estimate the number of over 65s will reach 8.1 million by 2056, and 11.2 million by 2101. One key opportunity to prevent sedentary lifestyles in older adults is to understand and promote motivation towards physical activity in middle-aged adults. This study qualitatively examined the motivationally relevant behaviours ('motivational atmosphere') of key social agents towards physical activity and sedentary lifestyles in adults between 30 and 60 years of age.

Methodology: Twenty participants (32–60 years old) of varying activity levels were recruited from local workplaces and a GP referral scheme. Participants took part in semi-structured interviews to examine which social agents affected their motivation towards PA and how/why. A critical rationalist philosophy was deployed in the gathering and analysis of data.

Results: Using inductive content analysis, 307 raw themes were coded into 38 categories and five higher dimensions, labelled: (1) providing information and impetus; (2) supporting progress and competence; (3) affiliation and belongingness; (4) logistical considerations; and (5) emotional support. Spouses, close family, work colleagues, GPs and the media were perceived to be highly influential social agents, with many others listed (e.g., personal trainers, local government). Whilst spouses, family and work colleagues influenced motivation through 'leading-by-example', 'reminding/persuading' and 'support/encouragement', GPs and the media were more likely to exert an influence by offering advice, guidance and recommendations, or in some cases 'sounding-the-alarm-bell'. The consistency of messages from these different agents (media, health professionals, friends/family) was also noted as a key determinant of attitudes and actions. Whilst health was often central to participants' responses, social interactions and friendships were also key reasons people gave for becoming or staying active (and for being sedentary). Further, there was preliminary evidence that the sources and types of influence changed as a function of current activity level.

Conclusion: The results facilitate future interventions by suggesting specific behavioural recommendations in relation to

known social agents, as well as guiding theoretical development/refinement. The findings suggest that interventions should encompass psychological and social as-well-as health considerations, and that health professionals must understand the 'motivational atmosphere' of each client. Finally, the findings suggest that future research and modelling should adopt methodologies that better address the complexity inherent in the social determination of motivation.

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Physical activity and optimism in young and mid-aged women



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Introduction: Physical activity has previously been shown to have a positive association with mental health. Most of this work has focussed on reducing the risk of poor mental health, such as depression. Much less work has focussed on promoting positive wellbeing. The association between physical activity and mental health may also differ by age. The aim of this prospective study was to assess the longitudinal association between physical activity and a specific aspect of positive wellbeing – optimism, in young and mid-aged women.

Methods: The study involved young ($n=9545$) and mid-aged ($n=11,319$) participants in the Australian Longitudinal Study on Women's Health, who completed triennial surveys from 1998 to 2010. Baseline age in 1998 was 22–27 years for young and 47–52 years for mid-aged participants. Physical activity was assessed as time spent in walking, moderate and vigorous activity in the previous week, and an index of MET.mins/week was derived and categorized into one of four levels (none, low activity, meeting guidelines, high activity). Optimism was assessed using the Life Orientation Test–Revised (LOT-R). Generalised estimating equation models (with 3-year time lag), with adjustment for sociodemographic, behavioural and health-related variables, were used to examine the relationship between physical activity level and optimism score, with no activity as the referent. Odds ratios and 95% confidence intervals are reported.

Results: In young and mid-aged women, a dose response relationship was seen with increasingly higher optimism scores with level of physical activity (vs no activity). Unadjusted results were low activity (2.03, 1.53–2.70), meeting guidelines (3.49, 2.59–4.67) and high activity (4.28, 3.16–5.64) for young women; low activity (2.52, 2.13–2.98), meeting guidelines (3.94, 3.31–4.68) and high activity (5.25, 3.16–5.64) for mid-aged women. After adjustment for potential covariates the odds ratios were attenuated but still significant; low activity (1.24, 1.01–1.60), meeting guidelines (1.52, 1.16–1.98) and high activity (1.64, 1.26–2.12) for young women; low activity (1.19, 1.03–1.37), meeting guidelines (1.41, 1.22–1.65) and high activity (1.59, 1.37–1.84) for mid-aged women.

Conclusions: In both young and mid-aged women, even low levels of physical activity appear to promote optimism, with increasing benefits from higher levels of physical activity. As optimism is an important component of positive wellbeing, physical activity should be encouraged as an integral component of a psychologically healthy lifestyle.

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Population attributable risk factors in women: Should we be investing more in the promotion of physical activity?



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Background: The Global Burden of Disease (GBoD) report suggests that high BMI, smoking, hypertension and physical inactivity are the major risk factors (in that order) for chronic disease in Australasia [1]. This is based on population attributable risks (PAR), which explain how much the burden from a specific disease would be reduced, if the effects of a single causal risk factor were eliminated. Estimates of PAR depend on the strength of the association between risk factors and disease, and the prevalence of the risk factor in the population. The aim of this study was to estimate changes in PARs for ischaemic heart disease attributable to these four major risk factors, across the adult lifespan in women.

Methods: Younger (age 18–23 years at baseline; $N=14,175$), mid-age (45–50; $N=13,205$), and older (70–75; $N=11,574$) women, recruited by random sampling from the Medicare data base, completed 3-yearly mailed surveys for the Australian Longitudinal Study of Women's Health (ALSWH) from 1996 to 2012. Prevalence estimates (P) for high BMI, smoking, high blood pressure and inactivity were obtained from the ALSWH for women in 15 age groups, using category cutpoints described in the GBoD report. Age and gender specific relative risks (RR) were extracted from the GBoD database. Population attributable risks (PAR) for each risk factor over 12 years were calculated using the formula: $PAR = P(RR - 1) / 1 + P(RR - 1)$.

Results: The PAR for smoking decreased from a high of 59% at age 22–27 to a low of 5.3% at age 70–75. The PAR for physical inactivity was higher than for high BMI across the lifespan, ranging from 51% in the young cohort at age 31–36, to around 25% in the older cohort, compared with a range of 33% at age 31–36 years, to 11% at age 85–90, for BMI. PARs for high blood pressure were lowest across the lifespan, ranging from 3% in the young cohort to 10% in the older cohort.

Discussion: In women, the population attributable risk of inactivity (for IHD) is higher than for any of the other major risk factors from age 30 to 90 years. This is in contrast with the GBoD report which suggests that high BMI is the major cause of ill health in Australasian adults. The data support the case for greater investment in physical activity promotion across the adult lifespan.

Reference

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