

HEALTHY REVOLUTIONS: PROMOTING CYCLING FOR WOMEN

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ABSTRACT

Cycling rates in Australia are low, and substantial gender differences occur for all three forms of cycling: transport, recreation and sport. This paper reports on a research study conducted in Melbourne, Australia, aimed at investigating reasons for gender differences in cycling, and identifying successful interventions for promoting cycling for women. Case studies of women's cycling programs were developed, based on participant surveys, program observation, individual interviews with program coordinators and focus group discussions with program participants. This paper reports findings from the individual interviews and focus group discussions.

Health and fitness; social support and encouragement; and opportunities and resources for participation in cycling were the principal motivations for commencing cycling. However, cycling undertaken principally as a means to a health end appeared to have little appeal to the women in this study. Factors associated with on-going participation in cycling included social interaction; setting and achieving cycling goals; participating in cycling events; acquiring new skills; and the fun and enjoyment associated with cycling in a pleasant outdoor environment.

Constraints included lack of confidence about the mechanical aspects of cycling; lack of cycling skills (especially cycling in traffic and in groups); lack of fitness and speed; adverse traffic conditions; driver aggression; and obtaining appropriate advice in a male-dominated environment. Programs that tapped into the motivating and sustaining factors for female cycling, and addressed the principal constraints, were well-received by women. A balance of theory and practice was important in introductory cycling programs, as was a supportive, friendly and patient learning environment that enabled women to learn at their own pace. Provision of on-going activities such as training sessions, social rides and cycling events matched to women's cycling abilities were important for sustaining cycling.

The findings of this study suggest that support for women's cycling programs represents a worthwhile investment in physical, mental and social health and community wellbeing. It is also important to bear in mind that behavioural change in the form of more women cycling more often is unlikely to be sustained in the long term in the absence of supportive physical, social, policy, and regulatory environments for cycling. Interventions at multiple levels are required, and are likely to be interactive – as more women are encouraged and supported to cycle they will advocate for improved conditions for all cyclists including women, men and children.

Introduction

The health benefits of physical activity for women are well-documented. Women in the higher quantiles of physical activity participation live longer¹, and are less likely to develop coronary heart disease,² stroke,³ respiratory disease,⁴ colon cancer,⁵ breast cancer,⁵ and type 2 diabetes.⁶ Moderate intensity exercise such as cycling assists weight management⁷ and smoking cessation,⁸ reduces levels of depression and stress, improves mood, raises levels of self-esteem, and relieves symptoms of premenstrual syndrome.⁹

Incidental activity through active transport (principally walking and cycling) provides an opportunity for incorporating physical activity into the routine of everyday living.^{10,11} Lifestyle interventions such as these have been shown to be more cost-effective than structured exercise programs.¹² Commuter cycling provides similar improvements in physical performance (VO₂max) as specific training programs¹³ and walking or cycling to work has a favourable effect on body fat markers and body mass gain.¹⁴ In its complementary role as a form of transport, cycling contributes to cleaner air, less congested cities and more people-friendly, livable communities.¹⁵

Despite these benefits, cycling rates in Australia and many other English speaking countries are low, and substantial gender differences exist. A national survey of participation in physical activity for exercise, recreation or sport among individuals aged 15 years and over conducted in 2001 by the Australian Sports Commission found that female participation in cycling was less than half that of men. Six per cent of females reported cycling at least once in the 12 months prior to interview compared with 13% of males¹⁶. Travel surveys in Australian capital cities consistently report significantly lower rates of cycling trips (travelling to work or school, shopping or for recreation) for females than males.¹⁸ In Australia, the female rate of commuting cycling is less than one third that of men.¹⁹

Substantial gender differences in cycling participation in Australia have led some researchers to suggest that women are simply not interested in cycling. For example in an evaluation of a newly established bike trail in Western Sydney, Merom et al²⁰ reported the usual inverse association between female gender and bikeway use and concluded that the gender differences in awareness and use of the trail "may imply that females are less interested in cycling..." Comparative international data challenge this assumption that cycling is an inherently gendered activity.

Inverse associations between female gender and cycling are common among English speaking countries such as Australia²⁰ and the United States²¹, but absent in several Western European and Asian countries. In Denmark, more women than men use bicycles for transport (17% of all trips undertaken by women compared with 15% for men).²² In the Netherlands the figures are 31% for women and 26% for men.²³ In Germany, among individuals aged 18 years and over, women make an average of 2.54 cycle trips per week, while men make 2.31 cycle trips per week, and since 1976, cycling rates have increased more rapidly among women than men.²⁴

In light of the health, social and environmental benefits of cycling, and data indicating no similar gender differences among some European populations, the gender difference in cycling participation in Australia requires investigation. There are some indications that Australian women's low rates of cycling are not due to an intrinsic dislike of cycling. Although participation rates are relatively low, cycling features in the top ten sport and recreation activities for women.¹⁶ Cycling appears in seventh position, with 6.1% of Australian women reporting having cycled in the previous 12 months. Cycling was more popular than bush-walking (5.5%), running (4.7%) and golf (3.2%). Fifty per cent of households in the Melbourne metropolitan area have at least one bicycle¹⁸, and in the March 2002 survey of attitudes towards cycling conducted for Bikewest in Western Australia, 37% of women indicated they expected an increase in the frequency of their cycling over the next six months.²⁵ These data suggest that, among women, there may be an interest in and capacity to participate in cycling that is not being translated into practice.

Because few studies have systematically investigated women's perceptions and experiences of cycling, little is known about what motivates and sustains their involvement in cycling. As Sherwood and Jeffery²⁶ note, relatively little information is available regarding what motivates individuals to initiate physical activity, to discontinue exercise after periods of regular physical activity, and to reinstate exercise following a lapse in regular activity. These knowledge deficits are particularly pertinent to women and cycling.

This paper presents preliminary findings from a research study currently being conducted in Melbourne, Australia, aimed at investigating reasons for gender differences in cycling, and identifying successful interventions for promoting cycling for women. The objectives of the study are to (i) identify the motivations, supports and constraints associated with women's participation in cycling; and (ii) undertake process and impact evaluation of a range of community-based initiatives aimed at increasing women's participation in cycling. The study is being conducted in two phases: (I) a qualitative exploratory phase, including case studies of women's cycling promotion programs; and (II) a quantitative phase comprising a cross-sectional survey of occasional and regular female and male cyclists to assess gender differences in motivations, supports and constraints for cycling. This paper reports findings from the qualitative phase of the study.

Methods

The study employed a multiple case study design. Case studies of seven community-based initiatives aimed at increasing women's participation in cycling were developed. The programs included educational and cycling skills development programs, community-based 'getting started' rides and events, retail-based initiatives, a workplace Ride to Work program, a multi-day bicycle touring event, and a triathlon/cycling sports and competition organisation established specifically for women.

Data collection methods included participant surveys, program observation, individual semi-structured, qualitative interviews with program coordinators, and focus group discussions with program participants. Results from the individual interviews and focus group discussions are presented in this paper. All individual interviews and group discussions were recorded on audio-tape, and transcribed verbatim for analysis. Descriptive qualitative data analysis was conducted, using key themes that emerged from the data to code participants' responses.

Results

Programs and participants

The programs included in this study ranged from community-based, volunteer-run programs that received no external funding and had about 20 participants, through to programs conducted by professional educators and/or coaches with external funding support and more than 100 participants. One community-based program was conducted in regional Victoria by a retired former competitive cyclist and his wife, and involved restoring donated bicycles, providing them to beginner, older females, teaching them to ride, and conducting midweek group rides. The retail-based initiative involved a female employee conducting weekend rides for novice women cyclists leading to their participation, as a group, in cycling events and organized touring rides. Educational programs generally comprised a series of about six sessions and included information-giving, provision of educational resources, group discussions, bicycle operation and maintenance, and cycling skills (eg use of gears, bicycle handling, and cycling in traffic). Some programs incorporated on-going cycling sessions and events, while others assisted women to establish links with community organizations, clubs and each other to help maintain their cycling.

Program and study participants ranged in age from 20 to 80 years and included students, full-time parents, part-time and full-time employees, and retirees. Participants lived in Melbourne, Canberra and the regional city of Geelong, and most were novice cyclists or returning to cycling after having cycled as a child. The majority cycled for recreation, but some were commuter cyclists and others competed in triathlons and bicycle races. There was some overlap between these types of cycling, with a small number of women combining all three.

Motivations for cycling

Physical activity promotion research has identified a range of factors that motivate and sustain physical activity participation. In this study of women and cycling, differing patterns of motivating and sustaining factors were evident. Motivating factors for commencing cycling (or returning to cycling after a period of not cycling) included health and fitness; relaxation and stress reduction; the opportunity to acquire new skills; training for mass participation cycling events; encouragement from family, friends or work colleagues; cycling with the family; an ideal activity for (often self-identified) 'non-sporty' types; the need to swap to a low-impact type of physical activity; coming from, or

having lived in a ‘cycling’ country (usually in Europe); concern for environmental issues; and ‘time for self’ after a long period of family commitments.

Once women became involved in cycling, a somewhat different pattern of sustaining factors emerged. Health and fitness were mentioned less frequently. Factors that women mentioned more frequently included: social interaction; setting personal goals and gaining satisfaction from achieving them; learning new skills in a safe and supportive environment; and receiving positive feedback and recognition from others (family, friends and work colleagues) for their cycling achievements. Women also frequently spoke of their enjoyment of training sessions and events; a sense of fun and independence associated with cycling as a form of mobility; pride in doing something ‘different’; being able to incorporate activity into their daily lives (not having to find time to “go to the gym”); contact with the environment; and increased self-confidence through learning new skills and achieving their goals.

Women consistently reported being motivated to cycle by ‘realistic’ role models rather than elite cyclists. Some women reported feeling intimidated by elite athletes, but motivated by ‘ordinary women’ who cycled (eg older women, women who had a disability or who had been ill, women with a range of body shapes, and women who cycled with children). Commuter cyclists (who mainly worked in the central business district of Melbourne) also mentioned the convenience of cycling, in terms of shorter traveling time and lower travel costs.

Supports

Participants in focus group discussions stated that programs and courses conducted for women (and usually *by* women) provided an important support for their cycling, as many program participants had poor cycling skills and low self-efficacy for cycling prior to participating in the programs. This finding needs to be interpreted cautiously as most of the participants in the study were recruited through women’s cycling programs. However, it is clear that a considerable number of the women who participated in the programs benefited from them, and some described quite moving life-changing experiences.

Many women reported that on-going support in the form of cycling with family or friends, or joining a cycling group or club was important for maintaining cycling after completing a course or program. As well as cycling *with* other people, the verbal and practical support of partners, family, friends and work colleagues were also important. Women who cycled to work were supported by seeing increasing numbers of women cycling to work (ie as the behaviour became more normative), and by improved facilities at work (eg showers, secure bicycle storage). Safe cycling routes were also important, but it was interesting to note that commuter cyclists sometimes make trade-offs between time and perceived safety when cycling to work. One woman described three routes she regularly used depending on how much time she had: an off-road path which was perceived to minimise traffic risks, but was longer and therefore relatively slow; a route using on-road lanes which was more direct than the off-road path and therefore quicker;

and a busy arterial road with no bicycle facilities which she perceived to be less safe but the quickest route when she was in a hurry. Cycling experience also impacted on cycling route choice, with some women preferring to cycle on-road after gaining experience cycling in traffic.

Safe and pleasant environments for cycling were important for recreational cyclists, particularly for older women. These women generally preferred off-road paths or quiet roads, and achievable distances and cycling pace.

Several women stated that modern, well-equipped bicycles were an important support for their continued cycling. They often reported that the bicycles they rode as children were uncomfortable (particularly the seats), ill-fitting, heavy and difficult to ride up hills (having fixed gears) compared with modern bicycles. Most had not been aware of the generational changes in bicycle technology and the impacts they have on the enjoyment of cycling, until they started using a modern bicycle. A potential downside to riding a well-equipped, modern bicycle was increased concern about bicycle security, particularly having to leave the bicycle parked in the street while at work.

As described above, several women were motivated to achieve cycling goals (eg participating in a challenging cycling event, cycling to work), but required specific supports to help them achieve their goals. For example, many women who were principally recreational, off-road cyclists wished to gain the flexibility of riding on-road but were too concerned about risks from traffic to do so. Learning new skills at their own pace from a trusted role model helped them do 'risky' things safely. The women's triathlon/cycling sports organisation included in the study provided a supportive organisational culture that included the provision of programs, training sessions, cycling events, and social activities. In addition, a strong philosophy of personal support for all participants regardless of ability was reinforced by members, coaches and the coordinating committee. Participating in cycling sessions with other women (eg riding with other women and coaches) helped them do things they would not do on their own (eg riding on the road). Many reported feeling safer riding in a group. The continuity of the sessions (ie knowing that someone will be there) was also important for sustaining their involvement. Organised events (eg an annual Tour de Femme, and Women and Girls Triathlon) that focused on participation rather than competition, and rewarded participants of all ages and ability, were more appealing to many women than more competitive events.

Constraints

Constraints included a range of personal and socio-environmental factors.

Personal constraints reported by a number of women included lack of confidence, lack of fitness, and low self-efficacy for bicycle selection, purchase, handling and maintenance. Before participating in the programs, many women did not know how to use gears, fix punctures, adjust seat height, or adjust helmets correctly. Many were uncertain of the road rules that apply to cyclists, and felt ignorant of many aspects of cycling etiquette (eg

‘acceptable’ bicycles and cycling clothing, riding in groups, passing other cyclists on off-road paths and on-road lanes. Their knowledge of local cycling routes was sometimes poor, and some novice women initially felt intimidated by more experienced cyclists’ perceptions of appropriate distances to cycle. For some beginners, 5km rides were perceived to be long and challenging. This perception usually changed with experience.

Concern about ‘keeping up’ on rides with male partners, other family members, women who are experienced cyclists, and established groups was a constraint for a number of women. ‘Getting dropped’ was experienced as demoralising and frustrating and seemed to reinforce “I’m no good at this” self-talk. Even when partners, friends and groups slowed down to stay with them, women often felt concerned they were holding them back. Supporting women through the initial stages of gaining the skills, fitness, strength and speed to cycle with more experienced riders may be crucial to maintaining women’s participation in cycling, particularly cycling for exercise and recreation.

Other personal constraints included cycling costs – not so much for the bicycle itself, as this was an expected cost, or they already owned a bicycle – but for clothes, accessories and up-dating the bicycle to improve fit and comfort, and keep pace with new bicycle technology. These unanticipated costs were a concern for some women. One woman described struggling with knowing “when to stop” in relation to bicycle up-grading and use of new bicycle technology.

Many women described bicycle shops as very ‘blokey’ environments, staffed principally by men, stocking bicycle equipment and clothes suitable mainly for men, and talking a (technical bicycle) language somewhat foreign to women. Women were not confident that their needs were understood, or could be satisfactorily met in this environment. Purchasing a bicycle was often problematic, due to the wide variation in types, models, sizes, functions, components and costs. Beginning female cyclists often agonised over these choices in an environment of considerable knowledge asymmetry.

Other constraints on cycling mentioned by participants included cold weather, getting up early in the morning, concern that a training session might be too hard, feeling self-conscious about what they look like in cycling gear, and aggression from motorists. There were reports of assault from car drivers – throwing objects, verbal abuse, striking and swerving towards them. Commuter cyclists also described changing the type of clothing they wore while cycling to reduce harassment from drivers, pedestrians and workmen. As one woman explained: “I’ve had to modify my clothing because I was getting harassed every single day and it was really starting to get me down. So now I ride in really daggy clothing and I find it makes a really big difference”.

Characteristics of successful cycling programs for women

The characteristics of successful programs to promote and support women’s cycling identified by study participants were those that addressed women’s motivations for cycling, provided appropriate supports, and helped them overcome the constraints they

experience, as described in the above three sections. As novice and more experienced cyclists had somewhat differing needs, these are considered separately.

Novice cyclists

Study participants attending programs and activities designed to support novice female cyclists described a range of program features that they had found useful. While it was considered important to receive basic theory and information through information-giving sessions, group discussion and printed materials, ‘hands-on’ practice was seen as crucial. Many women felt they learnt little from simply watching how to use gears or change a tyre. Similarly, while it was important to be familiar with the road rules as they apply to cyclists, actually cycling on the roads helped women learn the more subtle, nuanced behaviours and real-life decision-making required to feel comfortable and safe cycling in traffic. Role modelling by experienced group facilitators was also effective in demonstrating safe cycling behaviour in the myriad situations and environments not explicitly covered by formal road rules (eg safe turning at intersections, merging with traffic, safe distance from parked cars and within a road lane). Women needed to learn these skills in a safe and supportive environment, with a facilitator who did not pressure them to do things for which they were not yet ready. One program, which included on-road cycling, encouraged women to ‘become pedestrians’ (eg when turning at controlled intersections) if they felt concerned about blending with the motorised traffic. Observation showed that, over time, as their skills and confidence increased, they became more confident about ‘remaining a cyclist’ in a wider range of circumstances.

While practical aspects of programs were important, a balance needed to be achieved in terms of time commitment and program cost. Six-week programs (eg two and a half hour sessions over six consecutive Saturday mornings) with about a 40/60 theory/practice split seemed to work well for novice women. Shorter programs which provided ‘the basics’, were effective if the program included mechanisms for linking women with local resources such as cycling groups and clubs, and ‘female-friendly’ bicycle shops. If these community resources were able to provide the informal, practical tuition and support that the shorter programs were unable to provide, women were more likely to continue cycling after participating in a ‘getting started’ program.

Women preferred local programs that were affordable and held at a suitable time (eg Saturday mornings). While it was important to keep costs as low as possible, free courses sometimes had high drop-out rates, which program coordinators attributed to a lack of commitment. Getting the ‘technical talk’ level right was important, as was the creation of a supportive learning environment, where women felt comfortable asking ‘stupid questions’. Confident leadership and positive reinforcement while practising new skills were also important components of a supportive learning environment. Program participants related well to female facilitators who had a good understanding of novice female cyclists’ needs and concerns and acted as realistic female role models. Individual goal-setting and practical planning provided motivation and support for helping participants put their new knowledge and skills into practice.

Experienced cyclists

The majority of the experienced cyclists who participated in this study were fitness/touring/competitive cyclists rather than commuter cyclists, so the findings reported in this section apply more to the former than the latter. The more experienced women cyclists expressed a desire to acquire more specialised skills such as group riding, bicycle maintenance, and training for more challenging rides. These women required advice on new bicycle technology and equipment, and access to quality, affordable coaching for improved performance. While experienced cyclists often set more challenging goals than novice cyclists, they still appreciated support and access to resources to help them achieve these goals. This was commonly provided through cycling networks, groups, clubs and organisations, rather than the introductory courses that targeted novice cyclists. Communication about events and activities through the internet, email, mail and newsletters provided an effective means of maintaining contact with group members and participating in on-going activities.

Access to a cycling group with sustainable numbers at the right fitness/ability level was important for maintaining participation in exercise/recreational cycling. This is more difficult for women. Because there are fewer female cyclists, women's cycling groups are usually small, often contain a wide range of abilities, and are therefore more difficult to sustain. Splitting up into ability groups for rides can be effective if the numbers are sufficient. Incorporating new cyclists into an existing group can be difficult as the skill/fitness gap is often large. Providing ride leaders (sometimes certified cycling coaches) to look after newcomers was an effective means of supporting new cyclists. Other successful groups had developed a more informal culture of looking after each other on rides, ensuring that no-one is left behind and that assistance is provided with punctures and other difficulties. As women acquired more skills, fitness and confidence they often joined groups of predominantly male cyclists, provided they felt tolerated and supported.

It is also important to note that the social component of exercise/recreational cycling is a key sustaining factor for women choosing this form of cycling. Working towards, and achieving, their cycling goals was rarely an individual pursuit. Social support and recognition, both within their cycling group and from families, friends and the wider community, were mentioned frequently and positively by study participants.

Discussion and conclusions

Although female cycling rates in Australia are low, there are indications of an interest in and capacity to participate in cycling that is currently not being translated into practice.²⁷ This study makes a contribution to realizing this potential by identifying some of the motivations, supports and constraints on female cycling, and identifying characteristics of successful programs and activities aimed at promoting cycling for women.

Health and fitness, social support and encouragement, and opportunities and resources for participation in cycling were among the principal motivations for female cycling

identified in this study. These findings are consistent with the key motivations for women's participation in physical activity in general.²⁸ However, factors that *sustained* participation in cycling showed a somewhat different pattern. Interestingly, health and fitness appeared to have less salience for on-going participation in cycling than social interaction, setting and achieving cycling goals, participating in cycling events, acquiring new skills, and the enjoyment associated with cycling in a pleasant outdoor environment. These qualitative findings of differences between motivating and sustaining factors for cycling will be tested quantitatively in the second phase of the study comprising a survey of occasional and regular female and male cyclists.

Physical activity undertaken principally as a means to a health end appeared to have little appeal to the women in this study. However, being active through involvement in active recreation, transport, holidaying and sport seemed to provide a mechanism for more sustained participation. This is a neglected area of physical activity promotion research, where the focus has been on structured exercise programs, with evaluation evidence indicating limited reach, impacts and sustained behaviour change.²⁹ It is not possible to generalise these study findings to female physical activity, or indeed female cycling, since study participants self-selected to participate in the cycling programs and activities included in the study. Nevertheless, the findings suggest that health sector support (including financial support) for these types of less structured community-based activities may represent a cost-effective means of improving health through increased participation in physical activity¹², as least for a sub-set of women for whom structured exercise programs are unappealing and ineffective.

The constraints on physical activity for women are well-documented, and include lack of time, energy, money, partner support, social support, and transport, together with environmental and safety concerns.³⁰ Many of these constraints applied to women in this study. In addition, a number of cycling-specific constraints were also identified. Novice cyclists expressed concerns about the mechanical aspects of cycling, cycling skills (especially cycling in traffic and in groups), lack of fitness and speed, obtaining appropriate advice in a male-dominated environment, adverse traffic conditions, and driver aggression. A number of these constraints have been shown to impact differentially on women. The risks (actual^{31,32} and perceived) associated with active transport in countries with low rates of utilitarian walking and cycling are likely to have a differential impact on women, as women are more risk averse than men. In a meta-analysis of gender differences in risk taking, Brynes et al³³ found a statistically significant gender difference in a wide range of risk taking behaviours including driving (cycling was not included). In a telephone survey of 1880 adult Australians in 2004, significantly more females than males (46% and 38% respectively) agreed that "Aggressive drivers put me off cycling or walking".³⁴ An international survey of driver attitudes and behaviours found generally higher rates of aggressive driver behaviours in car-reliant countries such as the US and Australia.³⁵ These cultural differences in driver behaviour impact more negatively on women.

A census of cyclists using off-road paths, on-road lanes and roads with no bicycle facilities at 15 locations surrounding the central business district of Melbourne in 2004

found that females preferred to use bicycle facilities with some form of separation from motorised traffic.³⁶ These findings are consistent with the concerns described above, and also with gender differences in stated preferences for bicycle routes obtained from self-completed surveys.³⁷

Lack of time for physical activity, including cycling, also impacts differentially on women. In response to an open-ended item in the telephone survey of adult Australians referred to above, significantly more females than males (33% and 26% respectively) stated that “lack of time” is the reason they use their car for short trips rather than walking or cycling.³⁴ Child care and household responsibilities are major contributors to gender differences in time use. In Australia, women spend more time completing domestic duties per day than men (13% and 7% of their time each day, respectively) and undertake most of the direct child care of children aged 14 years or less, even when both parents work full time.³⁸

Not surprisingly, programs that tapped into the motivating and sustaining factors for female cycling, and addressed the principal constraints, were well-received by women. A balance of theory and practice was important in introductory cycling programs, as was a supportive, friendly and patient learning environment that enabled women to learn at their own pace. Introductory or ‘getting started’ programs were more likely to encourage sustained cycling if they included on-going activities (such as training sessions, social rides or cycling events) or links to community groups, organizations or networks providing similar opportunities. The activities provided by these community groups need to be matched to women’s cycling abilities or provide support and encouragement while women upgrade their skills and fitness. Women who cycle principally for transport may have less need to link in with community-based cycling groups and events, but even for these women, workplace Bicycle User Groups and Bicycle Victoria’s *Ride to Work and Beyond* program, provided motivation and support for cycling to work.

Cycling for active transport and recreation has the potential to improve the health of individuals, communities and the environment. These forms of incidental activity are as effective as structured exercise programs for achieving health benefits (such as reducing cardiovascular disease, type 2 diabetes and overweight/obesity), more cost-effective than structured programs, and likely to appeal to women (and men) who lead busy lifestyles. In spite of the demonstrated benefits, the health sector traditionally has done little to support these activities, which are mainly provided by community-based groups, clubs and networks with limited financial resources. Substantial synergies can be achieved through strategic support for community organisations promoting active lifestyles. Finland is one of the few industrialised countries to have successfully reversed the global trend towards increasingly sedentary lifestyles. Support for community-based, relatively unstructured activities that are accessible, fun and sociable and happen to require physical activity has been a key component of this successful strategy.³⁹ The findings of this study suggest that support for women’s cycling programs could represent a worthwhile investment in physical, mental and social health and community wellbeing.

It is also important to bear in mind that behavioural change (ie more women cycling more often) is unlikely to be sustained in the long term in the absence of supportive physical, social, policy and regulatory environments for cycling. The large differences in cycling rates and gender balance internationally will not be reduced through individual-focused interventions alone. Interventions at multiple levels are required, and are likely to be interactive – as more women are encouraged and supported to cycle they will advocate for improved conditions for all cyclists – women, children, men, and disadvantaged, isolated and minority population groups. Cycling ‘cultures’ do not just happen, they are created and recreated through the dynamic interplay of social, structural, political and environmental processes that shape the activities of everyday life.⁴⁰

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