

Conclusions: Parent perceptions of family-based PA may be broader than previously assumed and influences are complex and multi-dimensional. Family-based PA promotion programs need to consider this complex relationship in order to optimize success in promoting PA behaviors.

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#### INDIVIDUAL PERCEPTIONS OF PHYSICAL ACTIVITY IN A COMMUNITY-LEVEL INITIATIVE IN NORTH QUEENSLAND, AUSTRALIA

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Introduction: Community-level health initiatives advertise the benefits of physical activity, however, it is unknown how personally relevant these promoted benefits are to those who take part. The purpose of this study was to describe the personal experience of participation in the health programs, and to identify how appropriate the participants felt the programs were.

Methods: Participants were rural North Queensland residents participating in Australian federal government-funded health initiative programs offered by their local council. There were 25 participants (10 males, 15 females) whose ages ranged from 47 to 79. Twenty-one were in the 12-week Diabetes Australia *Beat It* program, and four participants were in a 10-week water aerobics program. Qualitative data was provided by participants during semi-structured interviews which asked about current exercise habits, reason for taking part in the program, and opinions about the program and facilitators. Results: Thematic Analysis was used to analyze the data. It was an inductive analysis that assessed semantic themes from a realist perspective. The themes found detail the personal definition of exercise (*Exercise to me*), the physical benefits of exercise (*Keep yourself, Future fitness, Observed changes*), and the psychological benefits of exercise (*socializing, challenging oneself, sense of achievement*).

Conclusions: The benefits that participants felt they gained from the physical fitness program, and their reasons for attending, were different to the programs' expected outcomes. Programs should aim to appeal and cater to the needs of a wide group of people who have limited access to exercise facilities and health behavior programs.

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#### EARLY CHILDHOOD DETERMINANTS OF PHYSICAL ACTIVITY DURING MIDDLE CHILDHOOD

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Introduction: Little is known about early childhood determinants of physical activity (PA) during middle childhood. This study investigated early childhood (3-5 years) determinants of children's moderate- to vigorous-intensity physical activity (MVPA) during middle childhood (6-8 years) using an ecological framework.

Methods: At baseline 1002 children took part in HAPPY; 548 participated three years later. Children wore Actigraph GT1M accelerometers (15sec epochs; Evenson cutpoints) for one week at both time points. Parents reported potential predictors at baseline. Regression analysis was used to identify determinants of children's MVPA controlling for center of recruitment, MVPA, child's sex and age, maternal education at baseline, and accelerometer wear time at both time points.

Results: Children spent more time in MVPA at follow-up than baseline (68.9 vs. 58.6 mins/day;  $p < 0.0001$ ). Children with higher BMI category at baseline were less active at follow-up (coef=-5.8,  $p=0.02$ ). Children who played with their siblings at baseline were more active at follow-up (coef=6.4,  $p=0.02$ ). Children being active on their own or with friends, preferring to play inside/do craft, parental PA, belief about the importance of being active as a family, confidence to support PA, PA interaction with children, number of TVs, having a TV in the child's bedroom and neighborhood constraints to active transport at baseline were not associated with children's MVPA at follow-up. Conclusions: Few determinants were identified. Investigating fluidity of parenting and child behaviors, and changes in children's lives following the transition to school, may be useful in identifying determinants of children's MVPA. Proximal, rather than distal, factors may be more important.

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#### OUTDOOR EXERCISE IS ASSOCIATED WITH BETTER CELL AGING PROFILES

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Introduction: Lifestyle factors (e.g. regular exercise) have been shown to impact the health and lifespan of an individual by affecting telomere length. There is also increasing evidence for the health benefits of nature experience, although previous studies often confound the effects of exercise and nature experience. It remains unclear, therefore, whether exercise in nature has effects superseding those of exercise alone. We investigated the effects of a lifestyle change programme involving exercise in nature-rich areas compared to exercise in a built environment and a no-exercise control group in terms of telomere changes and other health parameters. Methods: Sixty healthy, physically inactive adults (50% female, mean age 25.9 years) took part in a non-randomised 5-months lifestyle change programme involving regular endurance exercise, either in a nature-rich setting (n=20) or a fitness centre (n=20). The control group (n=20) stayed inactive. Telomere length and telomerase activity was measured before and after the intervention, in addition to bi-monthly assessments of a range of self-report, behavioural and physiological measures (e.g. cortisol).

Results: The results showed a significant increase in telomere length across groups, which was most prominent in the two exercise groups. The gym group had significantly less telomerase activity than the nature group after the intervention, whilst the nature and control groups maintained their telomerase levels. Conclusions: The environment in which exercise takes place matters to telomere maintenance. These findings have important implications for health promotion and public access to nature-rich places in an increasingly urbanized world.