



THE LONG TERM EFFECTIVENESS OF THE GREEN PRESCRIPTION

DR YASO KATHIRAVEL

SPORT AND EXERCISE MEDICINE REGISTRAR

ADJUNCT RESEARCH ASSOCIATE LINCOLN UNIVERSITY



New Zealand's specialist land-based university



"It's not a rash, it's moss. You need to start being more active than a tree."

- ▶ New Zealand is a small, seismically active and geographically constrained country
- ▶ The population is 4.5 million
- ▶ The health statistics do not reflect the image of the a healthy country



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New Zealand Health Statistics

- ▶ In 2016, the obesity rate in adults was 32% , an increase from 27% in 2006
- ▶ 11% of Kiwi children are obese
- ▶ The rate of obesity in NZ Maori is 47% and 66% in Pacific Islanders

New Zealand Health Statistics

- ▶ Cardiovascular disease causes a third of all deaths in NZ
- ▶ 240,000 people have been diagnosed with diabetes
- ▶ An estimated further 100,000 people are thought to be diabetic

Pandemic of Physical Inactivity

- ▶ The Lancet described physical inactivity as a pandemic in 2012
- ▶ Lee et al showed that decreasing physical inactivity by 25%, 1.3 million deaths could be averted.
- ▶ It has been well documented that physical inactivity increases the risk of adverse health conditions

Physical Inactivity in NZ

- ▶ In 2016, only 48% of New Zealanders were adequately active compared to 52% in 2006/2007.

Exercise in Primary Health Care

- ▶ One of the 7 best investments for increasing physical activity levels is integrating it into primary health care.

Green Prescription?

Rongoā Kākāriki
GREEN
PRESCRIPTION

- ▶ NZ primary health care exercise and activity initiative
- ▶ Funded by the Ministry of Health
- ▶ The patient's family doctor sends a referral to a regional sports trust

How does it work?

- ▶ a motivational interview followed by detailed physical activity prescription
- ▶ assistance to overcoming barriers to physical activity
- ▶ team based structure to physical activity





To quantify the effectiveness of Green Prescription on changes in physical activity levels 2 to 3 years following the original prescription

Research to date

- ▶ 16 years in existence
- ▶ Little information regarding its long term effectiveness in a mixed gender population
- ▶ In the short term (6-12 months) it is effective at improving physical activity levels and indicators of health

Study Method

- ▶ Retrospective phone survey of participants in Christchurch, NZ
- ▶ Patients were separated into compliant (n=91) and non-compliant (n=56) groups
- ▶ Ministry of Health physical activity survey questions based on the International Physical Activity Short Form (IPAQ-SF)

Timing of the Study

- ▶ Study was carried out between June – September 2015
- ▶ Four years following the magnitude 6.1 earthquake in February 2011
- ▶ When participants enrolled in the Green Prescription most of the sporting and exercise infrastructure had been destroyed.

Study Method

- ▶ Physical activity was operationalised into 3 levels in this study
- ▶ Sedentary (<30 min a week)
- ▶ Regularly physically active (at least 150 min of exercise, 30 min a day for 5 days)
- ▶ Physically active (>150 min a week, with exercise accumulated on one or more days of the week)

Demographics

- ▶ 147 participants
- ▶ 68% were female
- ▶ 84% were NZ European, 5% Maori, 11% other ethnicities
- ▶ Average age was 62 years
- ▶ Average BMI was 31
- ▶ Median income was \$20-\$30k



Outcomes

- ▶ Participants who completed the programme reported an additional 64 min (95% CI=16-110) of physical activity per week 3 years on



Outcomes

- ▶ 42% participants who completed the programme reported increasing physical activity compared to 29% in the non-compliant group



Outcomes

- ▶ 32% participants who completed the programme reported 150 min moderate physical activity compared to 26% for those who did not
- ▶ 48% of males completed the required 150min compared to 27% females

Why did people drop out?

- ▶ Medical or Injury (35.8%)
- ▶ Insufficient time (12.8%)
- ▶ Change of dwelling (7.7%)
- ▶ Spousal and personal disinterest (10.0%)
- ▶ 30.4% did not recall being given a Green Prescription!



Conclusions

- ▶ Green Prescription is effective in the longer term for both men and women
- ▶ Individuals that completed the Green Prescription remained more active 3 years after completing the programme



Where to from here?

- ▶ To do a prospective study within a large family medicine clinic
- ▶ Allowing us to monitor objective findings such as blood pressure and blood test results following physical activity interventions over a longer term frame

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