The REVAMP Study – Summary Report

December 2017
The REVAMP Study

Key findings

This natural experiment provides crucial evidence that the design and installation of a new play-space has the potential to positively influence park visitation and park-based physical activity among children and adults.

The ‘intervention’ park in which a new play-scape was installed had a 176% increase in park visitors from T1 (2013) to T2 (2014; 2 months after the installation), relative to the ‘control’ park.

The number of people who were observed engaging in moderate- to vigorous-intensity physical activity (MVPA) in the intervention park increased by 119% from T1 (2013) to T2 (2014), and by 128% from T1 (2013) to T3 (2015; 14 months after the installation), relative to the control park.

Visitor counts specifically for the new play-scape area increased from T1 (n=132) to T3 (n=1016) (more than 600% increase).

Aim

This study examined the impact of the installation of a play-scape in a large metropolitan park located in a low socio-economic status (SES) neighbourhood in Melbourne, Australia on park visitation and park-based physical activity compared with a control park. Specifically, the aims of the REVAMP study were to:

1. Examine whether park improvement increased overall park usage in the intervention park compared with the control park;
2. Examine whether park improvement increased the proportion of local residents engaging in park-based physical activity and active travel to and from the park in the intervention park compared with the control park; and,
3. Identify the specific aspects of the park refurbishment that attracted visitors to the park and encouraged park users to be more active.

The parks

The intervention park was Brimbank Park, a large metropolitan park (329 hectares) located 28km north-west of Melbourne’s CBD in a low SES area. The control park, Westerfolds Park, was also a large metropolitan park (120 hectares) located 22km east of Melbourne’s CBD in a high SES area. Although there were differences in overall size and SES between the two parks at baseline, both parks provided similar infrastructure for being active, such as extensive walking and cycling paths, grassy open space areas and basic playground equipment. They also had other supportive amenities to encourage visitation such as: toilets, car-parking and a variety of picnic shelters, tables and barbeque areas. Importantly, there were no planned improvements or changes to the control park during the study period.

**Refurbishment**

The refurbishment of Brimbank Park took place from September 2013 to February 2014 and involved the installation of an innovative $1.1 million play-scape suitable for children of all ages and abilities. The play-scape was designed with the intent of bringing children and adults back to nature, and to connect with the Indigenous cultural heritage of the region. Prior to refurbishment, the area where the play-scape was built was an open space area with no features or amenities, and other existing play equipment in the park was in poor quality and isolated without a sense of place. The playground at the control park was an older-style adventure playground with slides, swings, climbing equipment, and swing bridges.

Although the redevelopment focussed on the installation of a play-space for children, the REVAMP study aimed to assess the broader impact of the refurbishment on parents, families, adults and older adults.

**Play-scape equipment included:**

- a large 360-degree swing
- a traditional swing set
- a maze
- rockers
- a sandpit area
- a nature play area
- climbing equipment
- various sculptures
- significant landscaping
Measures

Timeline
Park visitation and park-based physical activity were assessed before (T1, 2013) the play-scape intervention, and at 2 months (T2, 2014) and 14 months (T3, 2015) post installation.

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<th>T1</th>
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<tr>
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<td>Sept 2013 - Feb 2014</td>
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<td>Baseline-</td>
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Measures
At each time point, multiple measures were used to examine visitation and physical activity at the two parks including:

- Observations of park visitors within pre-determined target areas on 4 weekdays (7.30am-4.30pm) and 4 weekend days (8.30am-4.30pm) using the System for Observing Play and Recreation in Communities (SOPARC) tool (T1=1460 scans, T2=1824 scans, T3=1824 scans)
- Objective monitoring of the number of people using the walking paths and the number of cars entering the parks
- Intercept surveys conducted in the parks with adult park visitors (T1=794 completed interviews, T2=1158, T3=1043)
- Cross-sectional surveys of local residents living within 5km of either park (T1=1487 completed surveys, T3=1460).
Observations of overall park visitors
The numbers of visitors at the intervention park increased significantly after installation of the play-scape
• Total visitor counts at the intervention park increased by 33% from T1 (n=2374) to T3 (n=3157), with declines in visitation of approximately 30% observed at the control park from T1 (2382) to T3 (1654).
• The age group with the greatest increase in visitor counts at the intervention park was children (1-12 years), with an increase from T1 (n=434) to T3 (n=922).

Visitation at the intervention park increased compared with the control park
• The intervention park had a 176% increase in counts of park visitors from T1 to T2, relative to the control park. The differences in counts of park visitors between T1 and T3, however, was non-significant.
• Across the different age groups, there were significant increases at the intervention park from T1 to T3, relative to the control park, in terms of the total number of child and adult visitors. No significant differences were seen with regard to the number of adolescents (13-20 years) and older adults (60+ years) observed.

Physical activity levels of park users increased at the intervention park compared to the control park, particularly among children
• The number of people who were observed engaging in moderate-to vigorous-intensity physical activity (MVPA) increased at the intervention park by 119% from T1 to T2, and by 128% from T1 to T3, relative to the control park.
• There were significant increases from T1 to T2 in engagement in MVPA at the intervention park, relative to the control park, among both children and adults. The number of children observed engaging in MVPA also increased from T1 to T3 at the intervention park, relative to the control park.

Play-scape visitors
Increases in observed visitation at the intervention park can be largely explained by an increase in visitors to the new play-scape
• Visitor counts specifically for the new play-scape area increased from T1 (n=132) to T3 (n=1016) (more than 600%).

There was a notable increase in the percentage of children play-scape users at the intervention park from T1 (11%) to T3 (43%), with a smaller increase in adults from T1 (28%) to T3 (42%). The increase in adolescent users was considerably smaller from T1 (0%) to T3 (5%).
• In contrast, visitor counts at the playground at the control park decreased by about 13% from T1 (n=448) to T3 (n=390).

Play-scape visitors at T3
• A similar proportion of males and females were observed at all time-points.
• Most people were observed on weekends.
• The pieces of equipment in the play-scape where the highest numbers of people were observed engaging in physical activity at T3 included the nature play area, the climbing structure, maze and swings.

Path monitors
• Path monitor counts, which measured people using the existing walking and cycling paths, increased by 32% from T1 (n=1137) to T3 (1495) at the intervention park.

Traffic monitors
Vehicle traffic counts increased over the three time-points at the intervention park with a decline in traffic counts observed at the control park; however, the difference over time between the two parks was not significant.

Intercept surveys: completed by adult park visitors
• Adult park visitation: regular visitation (>once per week over the past 3 months) by adults was not significantly different over time between the two parks.
• Child park visitation: there were increased odds of children’s regular visitation (>once per week over the past 3 months) at the intervention park at T2 compared with T1, relative to the control park. The difference for T3 versus T1 was not significant.
• Adult participation in MVPA: a lower proportion of adult park users at the intervention park reported engaging in MVPA at T2 and T3, (compared with T1), relative to the control park.

Survey of adults living within 5km of the parks
• Between 40 - 48% of respondents (or their child) had visited the intervention or control parks in the past 3 months at T1 and T3
• Visitation: The park refurbishment had no significant effect on reported regular park visitation (>once per week over the past 3 months) for both child and adult local residents.
• Adult participation in MVPA: There was a reduction in the proportion of adults who reported engaging in MVPA from T1 to T3 at the intervention park, relative to the control park.
• Child participation in MVPA: The park refurbishment had no significant effect on reported participation in MVPA for children.
• Park satisfaction: Residents living near the control park (high SES area) generally reported greater satisfaction with parks in their neighbourhood than residents living near the intervention park (low SES area). Increased satisfaction with the intervention park was reported from T1 to T3, with minimal changes in satisfaction observed at the control park.
• Accompaniment: The majority of respondents visited each park with their child, partner or another adult family member.
• Transport: The majority of respondents travelled to both parks by car, with 10-20% walking and less than 10% travelling by bicycle.
• The most important attributes for encouraging physical activity in the park were reported to be: it is well maintained, you personally feel safe going there, it has a relaxing atmosphere, it is easy to get to, and provides shade trees.

Summary of Findings
Key practical recommendations from this research for policy and decision makers, urban planning, and future park developments:

- Include well-designed, easily accessible play-scapes suitable for children of all ages and abilities to maximise visitation and physical activity in park refurbishments.
- Ensure design is a key component in place making at parks, as without good design parks may be less attractive as a destination.
- Engage with park users to obtain input regarding refurbishment or new park design.
- Ensure play-scapes include equipment suitable for older children and adolescents, such as adventurous and physically challenging equipment and sports equipment. Few adolescents are currently visiting our parks and the new play-scape at Brimbank Park did not attract adolescents to visit.
- Ensure facilities for adults and older adults are included, such as park furniture and well-maintained, attractive and easily accessible paths.
- Provide a safe, relaxing, aesthetically pleasing natural environment, with adequate shade, trees and undercover areas. Ensure parks and amenities within the park are well maintained, clean and attractive. Ensure adequate water supply and irrigation to promote greenery and cooling.
- Provide free drinking water and refilling fountains that are easy to get to. Please refer to VicHealth’s provision of drinking fountains guidelines: www.vichealth.vic.gov.au/media-and-resources/publications/provision-of-drinking-water-fountains-in-public-areas.
- Ensure clean, upgraded and carefully designed and positioned toilets. Improve café facilities, extend café opening hours and incorporate healthy food options.
- Encourage existing community groups to deliver their activities in the park and promote supported programs and organised activities within the park that have a focus on health and wellbeing benefits such as: interactive walks, walking groups, bike hire, social events and community gardens.
- Promote park visitation to community members who may be able to access the park more frequently than day-trippers and consider connectivity and accessibility to the park.
- Use the findings from this natural experiment to advocate for ongoing investment in park refurbishment and planning of other park developments. In addition, these findings can be used to encourage councils and other government and non-government organisations to prioritise park refurbishments in planning policy and ensure parks are appropriately designed to promote liveability and well-being.

Conclusions

This natural experiment provides crucial evidence that the design and installation of a new play-space has the potential to positively influence park visitation and park-based physical activity among children and adults. Increases in observed visitation at the intervention park can largely be explained by an increase in visitors to the new play-scape, which was mainly used by children aged 1-12 years. This $1.1M investment in a play-scape refurbishment has provided a number of community benefits, which have significant gains to the community’s health and wellbeing, social connection and liveability.

Parks are important community settings, and this study provides evidence of the potential public health benefits of investing in place making within parks. This study shows that refurbishing/upgrading parks with the community usage as the driver is one way to achieve more active communities. Understanding more about the park visitors, where they came from and whether park visitation increased their physical activity levels is important for determining public health outcomes of park interventions.

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