Identifying the most important park features for children

Associate Professor Jenny Veitch Play Australia, 12 October 2023

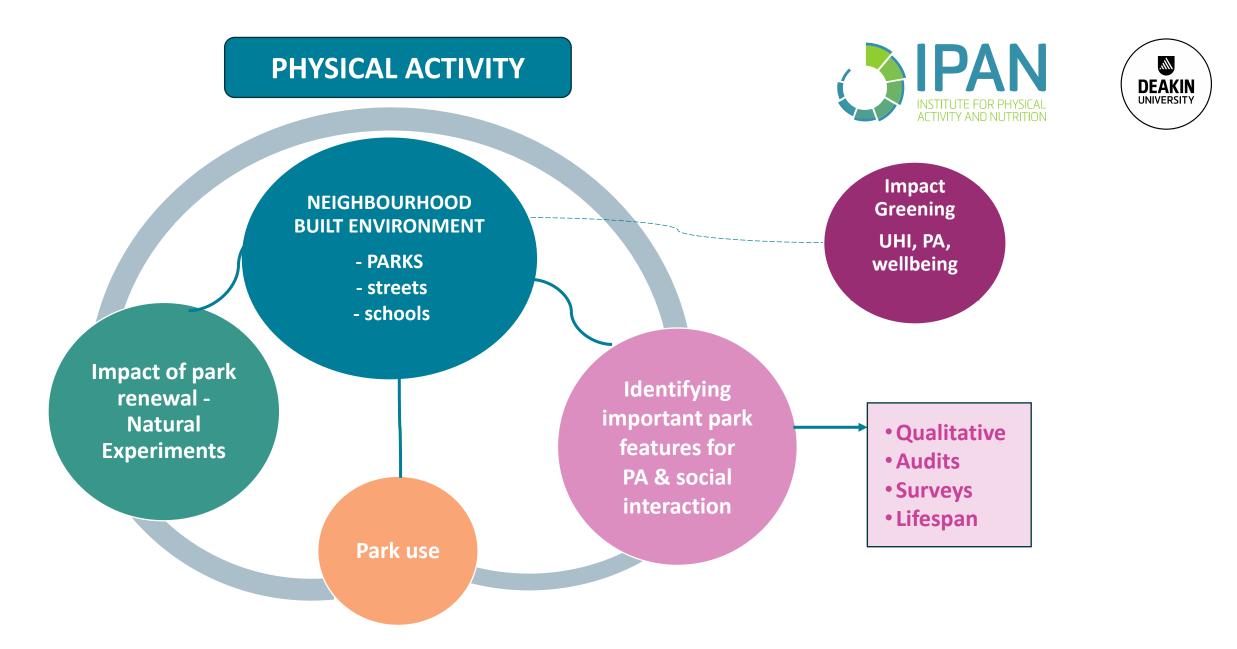






Introduction

- → Highlights of ProjectPARK
- → We worked with children to find out what's important to them
- → Critical for creating optimal play spaces, future design and planning



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Institute for Physical Activity and Nutrition

A world-leading research institute

Our purpose:

To conduct high quality, multidisciplinary nutrition & physical activity research to actively inform policy and practice to improve health, & build capacity in the field





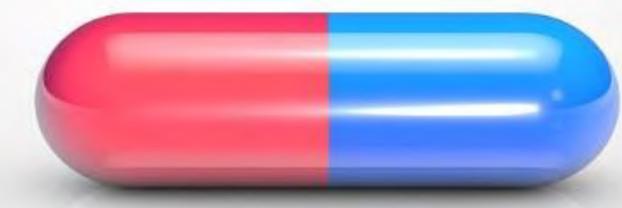


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Physical activity – the miracle cure?

Physical activity reduces risk* of:

- All cause mortality by 30%
- CVD by 35%
- Breast cancer by 20%
- Colon cancer 30%
- Type 2 diabetes 42%
- Depression 30%



Slows the progression of cognitive decline in the elderly

* Risk reduction across studies reported in Brown WJ, et al. Development of Evidence-based Physical Activity Recommendations for Adults (18-64 years). Report prepared for the Australian Government Department of Health, Aug 2012

GLOBAL ACTION PLAN ON PHYSICAL ACTIVITY 2018-2030

MORE ACTIVE PEOPLE FOR A HEALTHIER WORLD



Global action plan on physical activity 2018–2030: more active people for a healthier world. Geneva: World Health Organization; 2018. Licence: CC BY-NC-SA 3.0 IGO Worldwide, 1 in 4 adults & 3 in 4 adolescents (11–17 yrs) DO NOT MEET the global recommendations for physical activity set by WHO

Global physical activity action plan 2018-2030

Mission: To ensure all people have access to safe & enabling environments & to diverse opportunities to be physically active in their daily lives....

Target: 15% relative **reduction** in global prevalence of physical **inactivity** in adults & teens by 2030

GLOBAL ACTION PLAN ON PHYSICAL ACTIVITY 2018-2030

MORE ACTIVE PEOPLE FOR A HEALTHIER WORLD



CREATE CREATE CREATE CREATE ACTIVE ACTIVE ACTIVE ACTIVE SOCIETIES **ENVIRONMENTS** SYSTEMS PEOPLE SOCIAL NORMS AND GOVERNANCE AND SPACES AND PLACES POLICY ENABLERS OPPOR promote and safeguard the rights of all people, of all ages, to have equitable workforce capabilities, systems across sector: to achieve excellence in esource mobilization coordinated international national and subnational action to increase physica activity and reduce sedentary behaviour H

Global action plan on physical activity 2018–2030: more active people for a healthier world. Geneva: World Health Organization; 2018. Licence: CC BY-NC-SA 3.0 IGO

CREATE ACTIVE ENVIRONMENTS

SPACES AND PLACES

Create and maintain environments that promote and safeguard the rights of all people, of all ages, to have equitable access to safe places and spaces, in their cities and communities, in which to engage in regular physical activity, according to ability.



2.1	Strengthen the integration of urban and transport planning policies to prioritize the principles of compact, mixed-land use, at all levels of government as appropriate, to deliver highly connected neighbourhoods to enable and promote walking, cycling, other forms of mobility and the use of public transport
2.2	Improve the level of service provided by walking and cycling network infrastructure, to enable and promote walking, cycling, other forms of mobility and the use of public transport with due regard for the principles of safe, universal and equitable access by people of all ages and abilities, and in alignment with other commitments
2.3	Accelerate implementation of policy actions to improve road safety and the personal safety of pedestrians, cyclists , people engaged in other forms of mobility and public transport passengers, with priority to actions that reduce risk for the most vulnerable road users
2.4	Strengthen access to good-quality public and green open spaces, green networks, recreational spaces (including river and coastal areas) and sports amenities by all people, of all ages and of diverse abilities
2.5	Strengthen the policy, regulatory and design guidelines and frameworks to promote public amenities, schools, health care, sports and recreation facilities, workplaces and social housing that are designed to enable occupants and visitors with diverse abilities to be physically active in and around the buildings, and prioritize universal access by pedestrians, cyclists and public transport .

Why Parks? - Critical part of liveable cities



Social connectedness

Physical activity

Contact with nature

Mitigate climate change

2050: 70% world's population live in cities

What park features are most important?



Aim: Identify the **relative importance** of **park features** that attract visitors to parks & enhances physical activity & social interaction among <u>children</u>, <u>teens</u>, & <u>older adults</u>



Winner, Parks and Leisure Australia, <u>Vic/TAS</u> Awards of Excellence, Research Project Award 2020 Finalist, Parks and Leisure Australia, <u>National</u> Awards of Excellence, Research Project Award 2020

Funding: ARC Discovery Project: 2017-2020 (*DP170100188*) **Investigators:** A/Prof J Veitch, Prof A Timperio, Prof K Ball, Prof B Deforche





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Project**PARK**

Research design

Phase 1: Walk-along interviews in parks

Phase 2: Rating photos of park characteristics

Phase 3: Tasks to identify the **relative importance** of park features (adaptive choice-based conjoint analysis)



PHASE 1: Walk-along interviews

IMPORTANT PARK FEATURES FOR: CHILDREN 8-12 YEARS



30 completed a walk-along interview in a park to discuss park features

IMPORTANT PARK FEATURES FOR: **TEENS** 13-18 YEARS



34 completed a walk-along interview in a park to discuss park features



What children said...

What I like about the park:

"Probably the **MORE RISKY THINGS**, the more risk taking things, not like full on dangerous, but they **feel a little bit scary. A thrill**"

Girl, 10 years

What I like about the park:

"I like trees, water, stones and flowers because it's **NATURAL** and it's a **NICE place to be in**, and not like all roads and concrete"

Girl, 12 years

My PERFECT park:

"Slides, monkey bars, flying foxes. Oh, it's a **MASSIVE** climbing frame ..., 5 **MASSIVE** slides that go down, they're waterslides"

Girl, 9 years

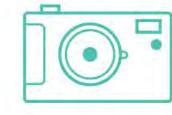
Article Exploring Children's Views on Important Park Features: A Qualitative Study Using Walk-Along Interviews

Jenny Veitch ^{1,*}, Elliott Flowers ², Kylie Ball ¹, Benedicte Deforche ^{3,4} and Anna Timperio ¹



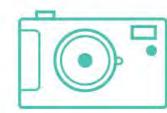
PHASE 2: Photo rating study

IMPORTANT PARK FEATURES FOR: CHILDREN 8-12 YEARS



272 rated 42 photos of different park features

IMPORTANT PARK FEATURES FOR: **TEENS** 13-18 YEARS



222 rated 40 photos of different park features

A water feature like a pond or lake



On a scale from 1 to 10, how much does the feature above make you want to do the following:

Does not make me want to
1Really makes me want to
8Really makes me want to
9102345678910Visit the park

Be active in the park

Be with other people in the park





A cafe or shop to buy food and drinks



On a scale from 1 to 10, how much does the feature above make you want to do the following:

Does	not make m	ie want to					Really n	nakes me v	vant to
1	2	3	4	5	6	7	8	9	10
Visit ti	he park								

Be active in the park

Be with other people in the park

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CHILD



<u>CHILD</u> photo rating study: Physical Activity



Large adventure playground (9.5)



d Obstacle course (9.1)



Giant slide (8.9)



Flying fox (8.7)



Things to climb (8.5)













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TEEN photo rating study: Physical Activity



Large things to climb (8.1)



Large adventure playground (7.9)



Outdoor fitness equipment (7.7)



Large slide (7.5)



Netball/ basketballs courts (7.4)





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PHASE 3: Adaptive Choice Based Conjoint Analysis

IMPORTANT PARK FEATURES FOR: CHILDREN 8-12 YEARS



252 completed a survey to identify the relative importance of park features

IMPORTANT PARK FEATURES FOR: TEENS 13-18 YEARS

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	_

244 completed a survey to identify the relative importance of park features

Adaptive Choice Based Conjoint (ACBC) Analysis

Identified the <u>relative importance</u> of park features for influencing choice of park for a) visiting, b) physical activity, c) social interaction

- Quantitative <u>market research</u> technique used to examine how much people value different characteristics of a product in their decision to choose it
- Decision-making scenarios consider a range of co-existing park features *jointly* as opposed to assessing each feature in isolation

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- Interactive process
- Comparable to real-world choices





Adaptive Choice Based Conjoint (ACBC) Analysis

Participants identified their preference for parks that included **different combinations** of selected park features (e.g., grassy open space) and levels (e.g., large, medium, little-to-no grassy open space)



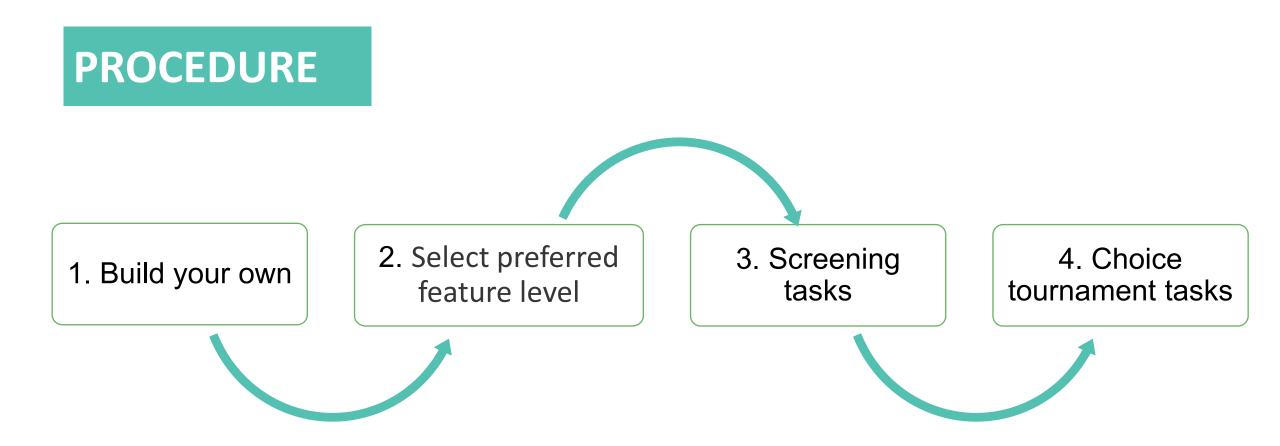
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BE ACTIVE IN PARKS: Feature	Level
Water feature like a pond, lake or creek	 Water feature like a pond, lake or creek No water feature
Peaceful and relaxed setting	 Peaceful and relaxed setting Not a peaceful or relaxed setting
Gardens, landscaping and plants	 Attractive gardens, landscaping and plants No gardens, landscaping or plants
Barbecue or picnic area with shade and tables	 Barbecue or picnic area with shade and tables No barbecue or picnic area
Walking paths	 Walking paths No walking paths
Well maintained grass	 Well maintained grass Poorly maintained grass
Fountain	 Fountain No fountain
Birdlife	 Lots of birdlife Some birdlife No birdlife
Shady trees	 Lots of shady trees A few shady trees No shady trees
Grassy open space	 Large grassy open space area Medium grassy open space area Little to no grassy open space area
Signage, information or maps	 Lots of signage, information boards or maps Some signage, information boards or maps No signage, information boards or maps







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From this list, please choose <u>6 park features</u> that would most likely encourage you <u>to visit</u> a park?
Birdlife
Water feature like a pond, lake or creek
A peaceful and relaxed setting
Shady trees
Gardens, landscaping and plants
A barbecue or picnic area with shade and tables
Signage, information or maps
Walking paths
A cafe or shop to buy food or drinks
A fountain
Grassy open space
Back Next





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For the feature(s) listed, please select the feature level that would most likely encourage you to visit a park.

Feature	Feature Level
Birdlife	 Lots of birdlife Some birdlife No birdlife
Shady trees	 Lots of shady trees A few shady trees No shady trees
Grassy open space	 Large grassy open space Medium grassy open space Little to no grassy open space
	Back Next





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Screening questions (6) - showing different park profiles

Here are profiles of <u>different parks</u> that you might like <u>to visit</u>. For each profile, indicate whether or not you would like <u>to</u> <u>visit</u> this park.

(1 of 6)

Park is not well maintained or clean	Park is well maintained and clean	Park is not well maintained or clean	Park is well maintained and clean
A peaceful and relaxed setting	Not a peaceful or relaxed setting	A peaceful and relaxed setting	Not a peaceful or relaxed setting
Sense of safety from strangers and undesirable people	Feeling unsafe from strangers or undesirable people	Feeling unsafe from strangers or undesirable people	Sense of safety from strangers and undesirable people
Some birdlife	No birdlife	Some birdlife	Lots of birdlife
Little to no grassy open space	Medium grassy open space	Large grassy open space	Medium grassy open space
Large park size	Medium park size	Small park size	Medium park size
I would like to visit this park.	I would like to visit this park.	I would like to visit this park.	I would like to visit this park.
I would <u>not</u> like to visit this park.	○ I would <u>not</u> like to visit this park.	I would <u>not</u> like to visit this park.	○ I would <u>not</u> like to visit this park.

Choice tournament tasks (13) - choose between 2 parks

From these two parks (2nd and 3rd columns), which **one** would you prefer **to visit**? (We've grayed out any park features that are the same, so you can just focus on the differences between the two parks).

(1 of 13)

Birdlife	Lots of birdlife	Lots of birdlife
A peaceful and relaxed setting	A peaceful and relaxed setting	A peaceful and relaxed setting
Shady trees	A few shady trees	No shady trees
Gardens, landscaping and plants	No gardens, landscaping and plants	No gardens, landscaping and plants
A barbecue or picnic area with shade and tables	A barbecue or picnic area with shade and tables	A barbecue or picnic area with shade and tables
Grassy open space	Medium grassy open space	Little to no grassy open space
	0	0







- Hierarchal Bayes Estimation: 2 parameters (Sawtooth Software)
 - Part-worth utility scores: desirability of a feature level (within features)
 - Average relative importance scores (%): impact that a feature has on choice

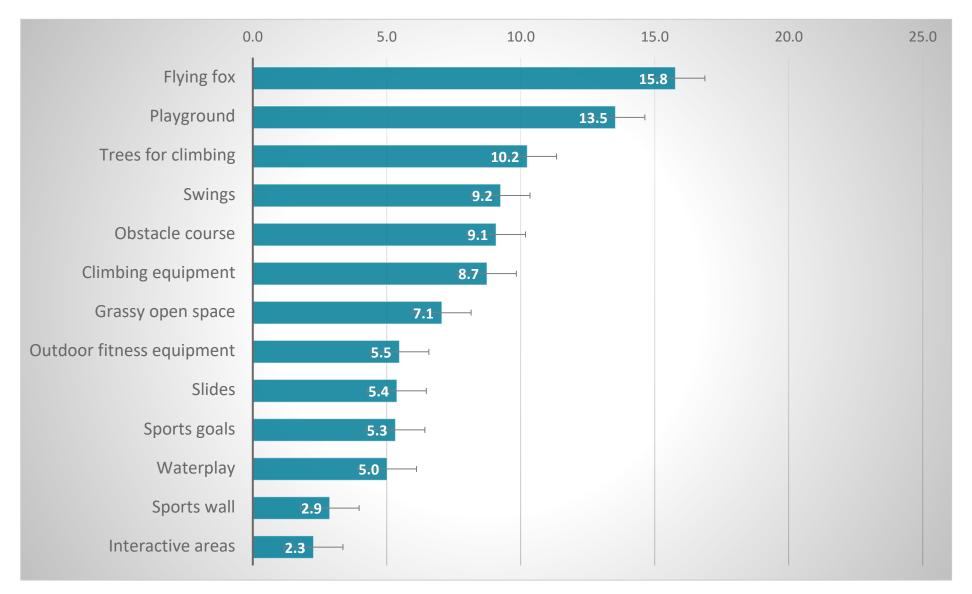
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Results: CHILDREN Relative importance scores for <u>PHYSICAL ACTIVITY</u>



Project**PARK**

IMPORTANT PARK FEATURES FOR: CHILDREN 8-12 YEARS



Features that encourage <u>CHILDREN</u> to be active in parks

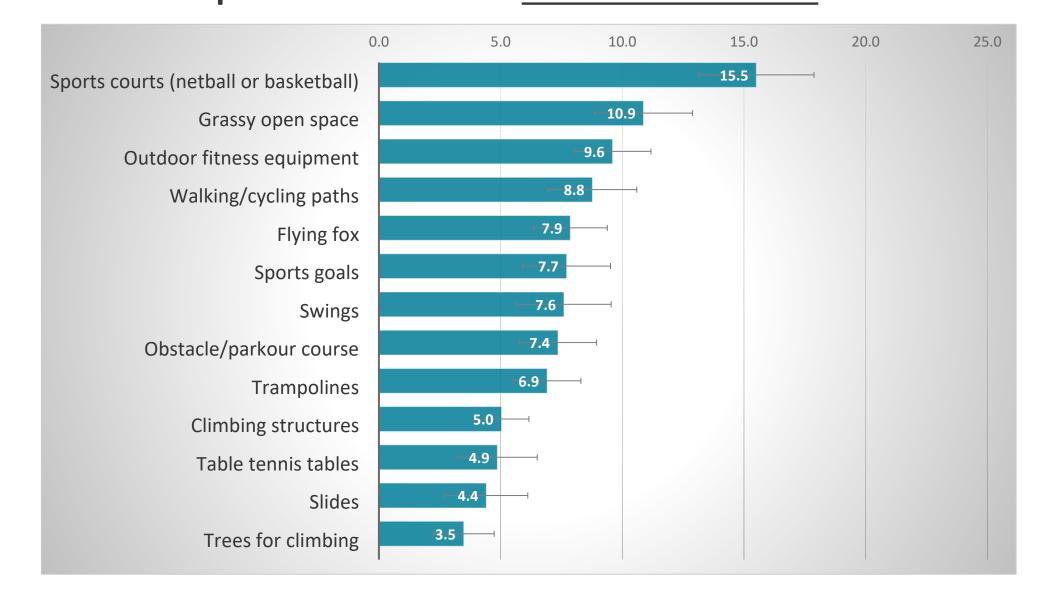
- 1 Long flying fox (15.8%)
- 2 Large adventure playground (13.5%)
- 3 Lots of trees for climbing (10.2%)
- 4 Large round swings (9.2%)
- 5 Obstacle course/parkour area
- 6 Large climbing equipment
- 7 Outdoor fitness equipment
- 8 Giant slides
- 9 Sports goals
- 10 Water play areas

Veitch, Ball, Rivera, Loh, Deforche, Timperio. International Journal of Behavioural Nutrition and Physical Activity 2021.

TOP

10

Results: ADOLESCENTS Relative importance scores for <u>PHYSICAL ACTIVITY</u>



Project**PARK**

Features that encourage <u>TEENS</u> to:

IMPORTANT PARK FEATURES FOR: **TEENS** 13-18 YEARS



Visit parks

1 Large swings (16.3%)

TOP

10

- 2 Large grassy open space (10.3%)
- 3 Café (9.6%)
- 4 Sports goals
- 5 Trampolines
- 6 Quiet, private place to hang out
- 7 Outdoor fitness equipment
- 8 Giant slides
- 9 Obstacle course/parkour
- 10 Table tennis tables

Be active in parks

- 1 Sports courts (15.5%)
- 2 Large grassy open space (10.9%)
- 3 Outdoor fitness equipment (9.6%)
- 4 Walking/cycling paths
- 5 Long flying fox
- 6 Sports goals
- 7 Large swings
- 8 Obstacle course/parkour area
- 9 Trampolines
- 10 Large things to climb

Rivera, Timperio, Loh, Deforche, Veitch. Health Place 2021

International Journal of Behavioral Nutrition and Physical Activity	
Home About Articles	Submission Guidelines
N N	
Research Open Acces	Published: 09 October 2021
	ng children's preference for park features
	ge physical activity: an adaptive choice
based conjoi	
Jenny Veitch 🖂, Kylie Ba	all, Elise Rivera, Venurs Loh, Benedicte Deforche & Anna Timperio



Children

- Long flying fox
- Large adventure playground
- Trees for climbing

<u>Teens</u>

- Large swings
 Large grassy
- open space
- Sports courts

Adults

- Sense of
- safety
- Good maintenance
- Paths

Older Adults

- Shady trees
- Peaceful & relaxing
- Paths

We have created **USER FRIENDLY** summaries of the findings

Contact:

jenny.veitch@deakin.edu.au



Project**PARK**

IMPORTANT PARK FEATURES FOR: CHILDREN

ProjectPARK: a study with children 8-12 years to identify the park features they consider to be most important for their park visitation, park-based physical activity and social interaction (2017-2020)

30 completed a walkalong interview in a park to discuss park features

272 rated 42 photos of • different park features

252 completed a survey to identify the relative importance of park features

FEATURES THAT ENCOURAGE TOP 10 CHILDREN TO VISIT PARKS

- Large adventure playground

- 4 Obstacle course or parkour area to climb on
- 5 Long flying fox
- 7 Water play area
- 9 Large swings (i.e. 960^o swing)
- 10 Trees for climbing

FEATURES THAT ENCOURAGE ТОР 10 SOCIAL INTERACTION IN PARKS

- 1 Large adventure playground
- Obstacle course or parkour area to climb on

- 8 Café
- 10 Swings you can use in a group (i.e. swings in a circle)



FEATURES THAT ENCOURAGE 10 CHILDREN TO BE ACTIVE IN PARKS

- Long flying fox
- 2 Large adventure playground
- 4 Large round swings²
- 5 Obstacle course or parkour area to climb on⁴
- 6 Large climbing equipment

- 10 Water play area?

For all outcomes, children valued large adventure playgrounds and equipment that provided opportunities for climbing and physically challenging play

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investigators: A/Prof Jenny Veitch, Prof Anna Timperio, Prof Wie Ball, Prof Benedicta Deforche Jerny Velich is supported by an Australian National Heart Foundation Futur Lasder Fellowship (JD 101528) Qualin University CROOS Previder Code: 001338

Project**PARK**

IMPORTANT PARK FEATURES FOR: TEENS

ProjectPARK: a study with teens 13-18 years to identify the park features they consider to be most important for their park visitation, park-based physical activity and social interaction (2017-2020)

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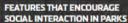
222 rated 40 photos of different park features

244 completed a surv
to identify the relative
importance of park fea

turies

FEATURES THAT ENCOURAGE TEENS TO VISIT PARKS

- Large swings (i.e. 360° swing)
- 2 Large grassy open space
- 3 Café
- Sports goals¹
- 5 Trampolines²
- Quiet, private place to hang out 6
- 7 Outdoor fitness equipment
- Giant slides² 8
- 9 Obstacle course or parkour area to climb on¹
- 10 Table tennis tables¹



- 1 Café
- 2 BBQ/picnic area
- Sports courts (netball or basketball)
- Traditional swings⁸ 4
- 5 Large grassy open space
- Sports goals¹ 6
- 7 Long flying fox²
- 8 Interactive areas (e.g. touch-sensor illuminated statues)
- Trampolines
- 10 Giant slides

Particularly for males Particularly for temples "Swings were more important for females than males, particularly group swings in a circle

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TEENS TO BE ACTIVE IN PARKS 1 Sports courts (netball or basketball) 2 Large grassy open space¹

FEATURES THAT ENCOURAGE

- 3 Outdoor fitness equipment²
- Walking/cycling paths
- 4
- 5 Long flying fox
- 6 Sports goals¹
- 7 Large swings (i.e. 360° swing)
- 8 Obstacle course or parkour area to climb on
- 9 Trampolines
- 10 Large things to climb (i.e. climbing structures)

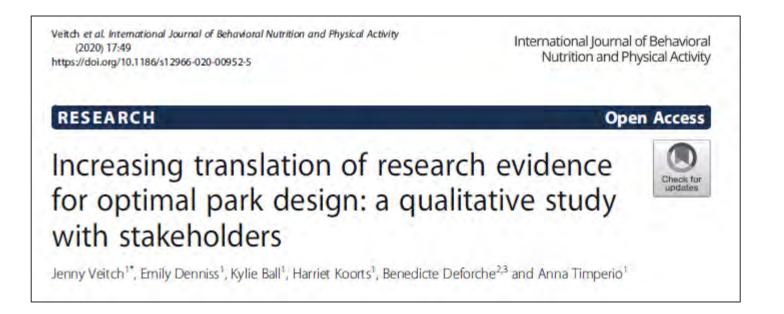
In all three phases, teens tended to prefer park features that were large, adventurous, and challenging, such as a long flying fox

deakin.edu.au/ipan For further details please contact: A/Prof Jenny Veitch IPAN, Deakin University jenny.veitch@deakin.edu.au

Investigators: Bise Rivera, A/Prof Jenny Veitch, Prof Anna Timperio, Prof Kylie Ball, Prof Benedicte Deforche Funded by an Australian Research Council Discovery Project (DP170100188) Jenny Veitch is supported by an Australian National Heart Foundation Future Leader Fellowship (ID 101928) Deakin University CRICOS Provider Code: 001138

Interviews with Stakeholders

- 23 key stakeholders employed in park design, planning and management
- Explored factors contributing to decision making and design of new parks and strategies for translating evidence to policy and planning practice







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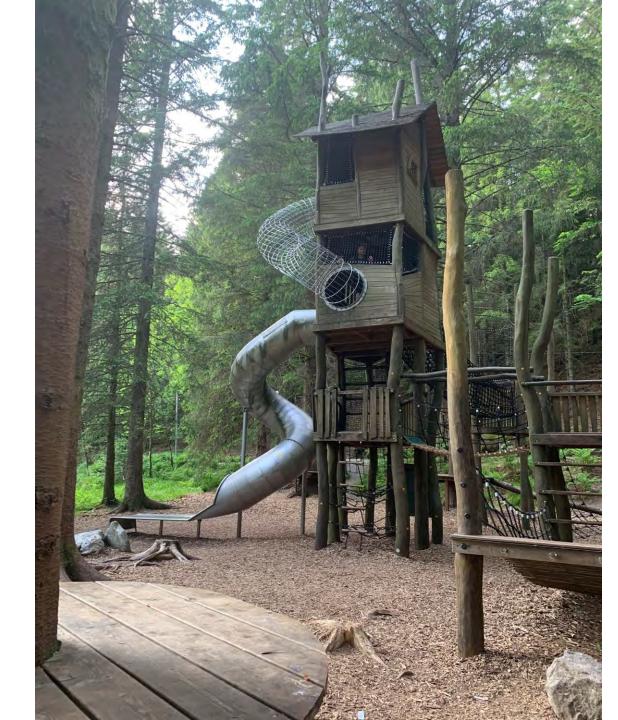
Closing

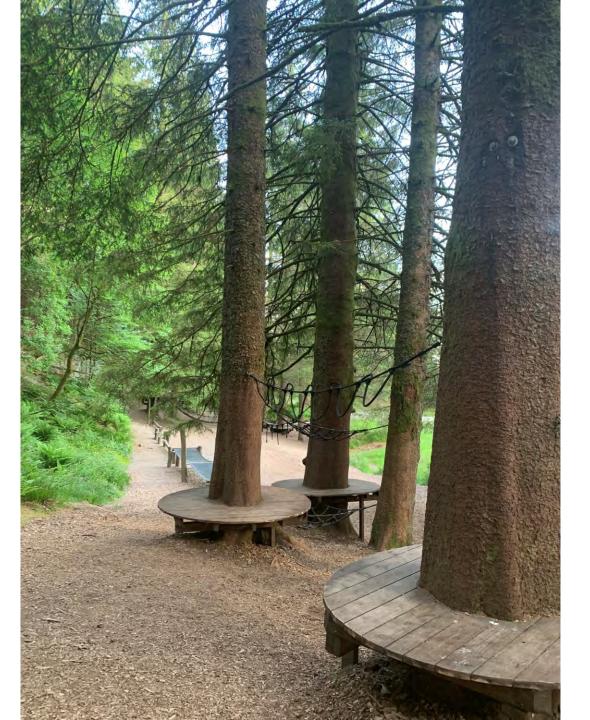
- → What I know....
- → What I hope....

→ What's next?

Natural experiments Virtual reality studies Collaborative work with industry Different settings (e.g. schools)



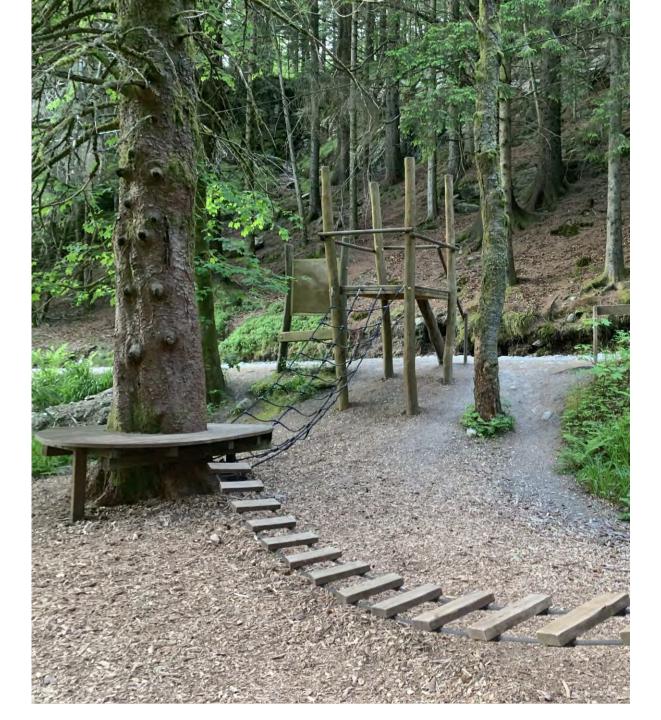














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Email: jenny.veitch@deakin.edu.au, Deakin University, IPAN

Resources: https://ipan.deakin.edu.au/impact-and-resources/#research









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