

Measuring adult's perceptions on outdoor risky play with a photo-based questionnaire

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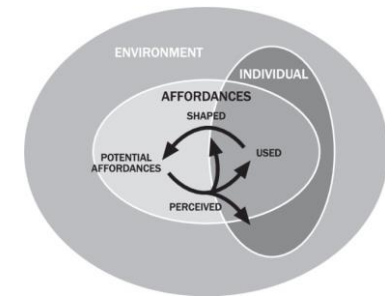
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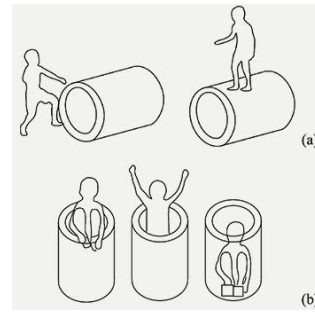
Introduction

Many critical reasons to promote children outdoor play (Fjortoft, 2001, Brusonni et al, 2015 ; Johnstone et al, 2022^{a,b})

- ✓ Physical activity and physical fitness
- ✓ Motor development
- ✓ Self confidence and autonomy
- ✓ Social skills
- ✓ Biophilia and awareness of nature



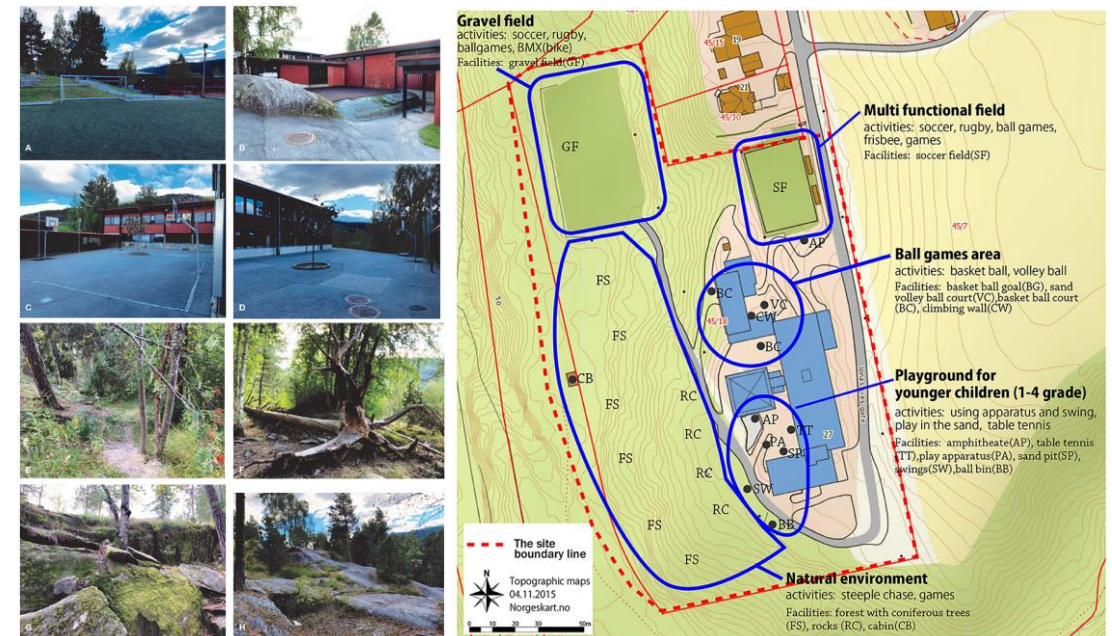
Kyttä, M. (2003)



Atmodiwirjo, P. (2014).

Affordance of outdoor environments

=> Challenging play



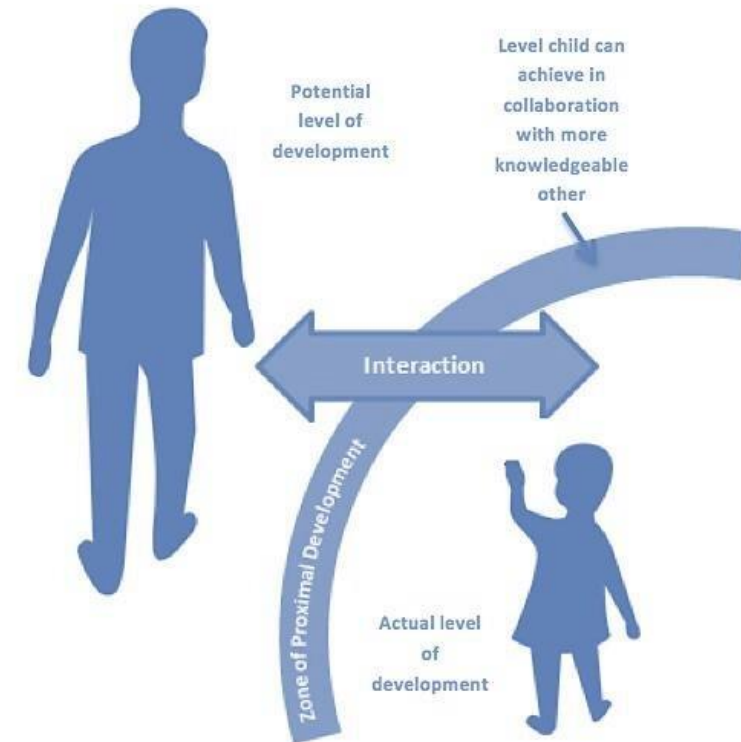
Kjønniksen, L., Wiium, N., & Fjortoft, I. (2022)

Introduction

Challenging play ⇔ Risky play

Categories	Risk	Sub-categories
A: Great heights	Danger of injury from falling	Climbing Jumping from still or flexible surfaces Balancing on high objects Hanging/swinging at great heights
B: High speed	Uncontrolled speed and pace that can lead to collision with something (or someone)	Swinging at high speed Sliding and sledging at high speed Running uncontrollably at high speed Bicycling at high speed Skating and skiing at high speed
C: Dangerous tools	Can lead to injuries and wounds	Cutting tools: Knives, saws, axes Strangling tools: Ropes, etc.
D: Dangerous elements	Where children can fall into or from something	Cliffs Deep water or icy water Fire pits
E: Rough-and-tumble	Where the children can harm each other	Wrestling Fencing with sticks, etc. Play fighting
F: Disappear/get lost	Where the children can disappear from the supervision of adults, get lost alone	Go exploring alone Playing alone in unfamiliar environments

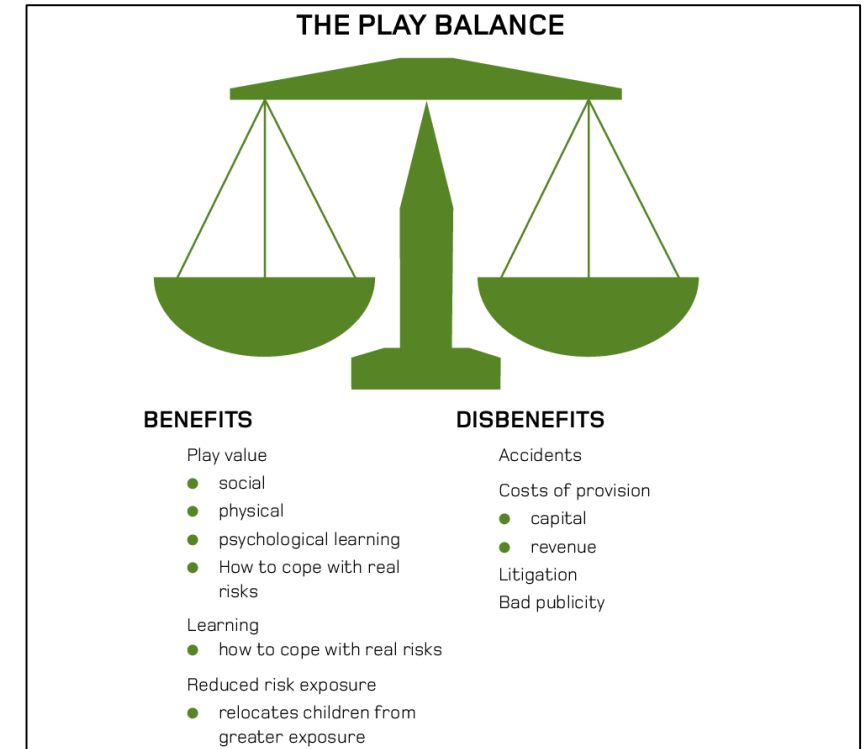
(Sandseter, 2009)



Zone proximal of Development (Paine et al 2017)

Introduction

- ✓ Children's possibilities to play highly depends on dangers associated with situation and adults' attitudes toward situations
- ✓ Adults' perceptions on the situation may influence decision-making
- ✓ The « Play balance model » underlines the importance of benefits and disbenefits associated with playing situations (Ball et al, 2002).
- ✓ Parents allow their child(ren) to play when the potential benefits outweigh any undesirable consequences (Gull et al, 20218 ; Jelleyman et al, 2019).
- ✓ Parental decision making is mostly based on a subjective analysis of the situation rather than on objective criteria (Little, 2015)
- ✓ "Affect heuristic" theory (Slovic et al. 2005) => affective dimension related to a singular situation significantly influences perception of associated benefits and dangers
- ✓ Relevance of measuring adult's perceptions on outdoor risky play



Ball et al, 2002

HOW ?



Concept of the Photo-Based Questionnaire

Selection of **outdoor play situations** (description + picture).

The use of photos associated with a descriptive sentence aimed to create **virtual situations** that are as **credible** as possible to allow participants to **project themselves into the situation** and to facilitate the situation's representations.

For each photo-based situation, participants have to reply to **questions** about their **perceptions and decisions**.

This approach ensures that participants **all refer to the same situation** when answering the questions.

3 additional advantages:

- 1) Questionnaire **easy to use** for both online and paper questionnaires;
- 2) Same perception scales can be used across different situations => allowing **analyses across all situations** collectively whilst retaining the ability to explore individual situations and to achieve comparisons between situations
- 3) Enables to explore situations that have **never been experienced by participants**.

Photo-based questionnaire

- ✓ Measuring adult's perceptions on outdoor risky play
- ✓ Decision-making process

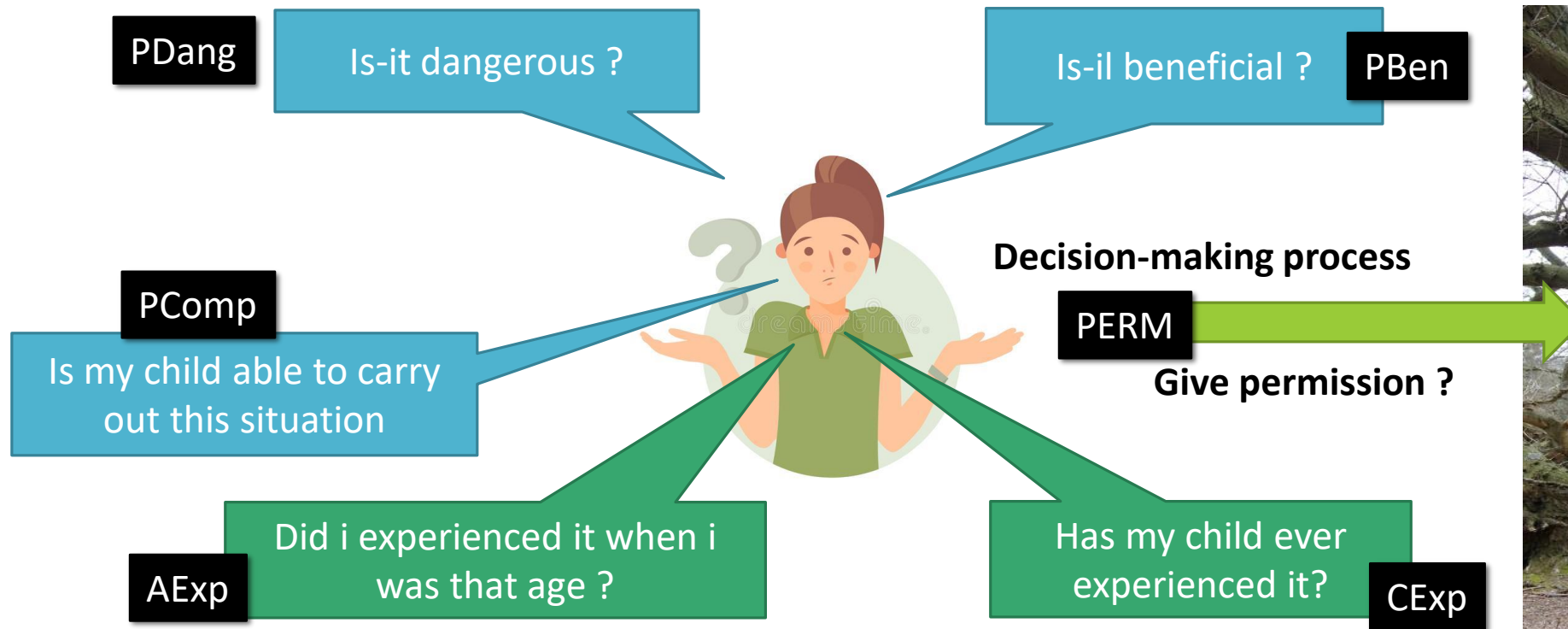


Photo-based questionnaire

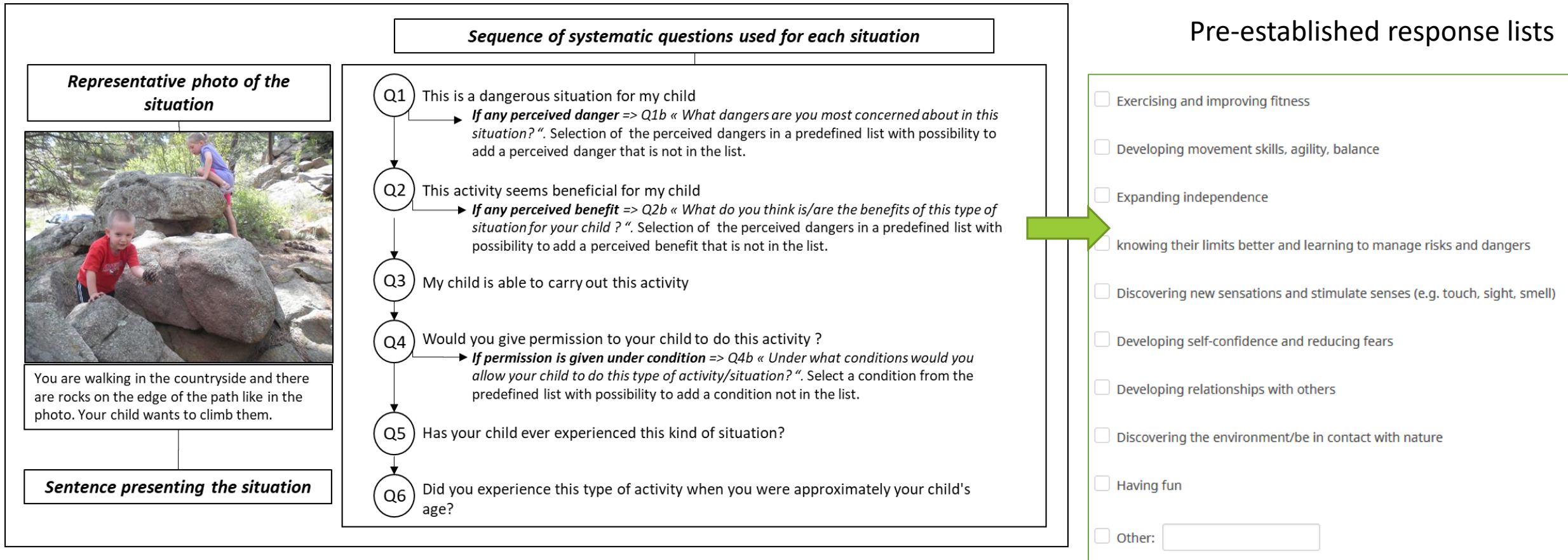


Photo-based questionnaire

Children aged from 1,5 to 6yo



Online
Limesurvey

10 situations

Etude ONE : Jidovtseff et al, 2022

1. Climbing on a rock*	2. Riding a balance bike*	3. Sawing a piece of wood*	4. Playing near a pond*	5. swordplaying with wooden sticks*
				
6. Playing freely in a wood*	7. Playing under the rain	8. Petting a dog	9. Eating berries	10. Running barefoot on grass
				

Questionnaire need to be adapted to the targeted population

Photo-based questionnaire

Adolescents aged from 13 to 18yo

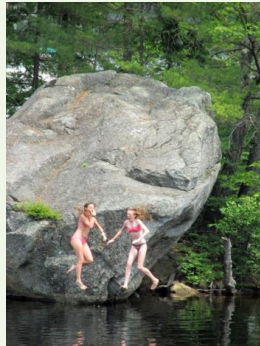


Online
Limesurvey

10 situations

Etude ONE : Jidovtseff et al, 2022

1. Jumping in a river from a high rock*



2. Playing at the skatepark



3. To use a hedge trimmer



4. Unsupervised swim in a lake*



5. take part in a campfire with friends*



6. Rough and tumble play*



7. Walking alone in the nature



8. Playing outside despite heavy rain



9. joining friends at dusk



10. attending a festival with friends



Questionnaire need to be adapted to the targeted population

Situation 2 : Riding fast a balance bike



You are riding on a path with your child, who has a balance bike like the one in the photo. There is a slight descent. He wants to let himself be carried away by the speed without braking. There are no dangerous elements around.

Give permission

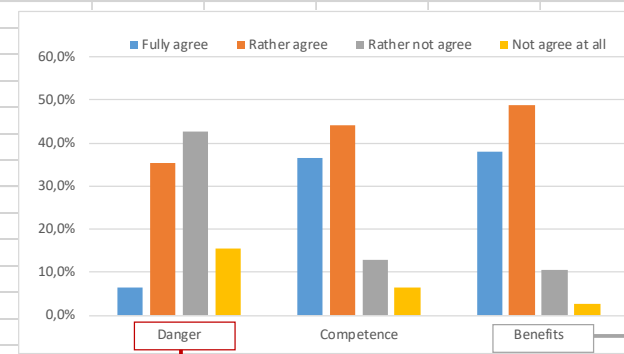
Yes, always	23,4%
Under conditions	68,2%
Forbidden	8,5%

Children experience

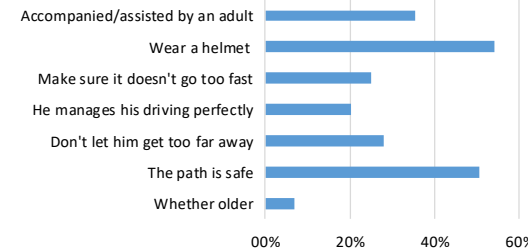
Yes	61,7%
Probably Yes	14,2%
Probably no	6,0%
No	18,2%

Parent experience

Yes	63,7%
No	36,3%



Conditions for permission



Parents' additional comments

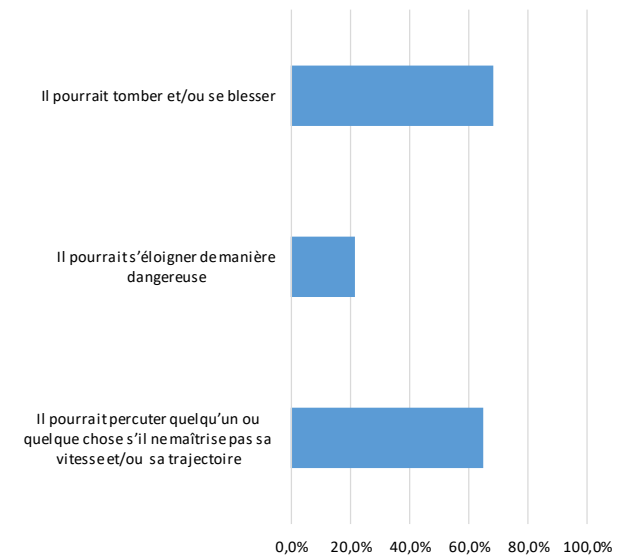
"A dog or a malevolent individual could approach and I might be too far away to intervene in time.."

"It could come across a vehicle."

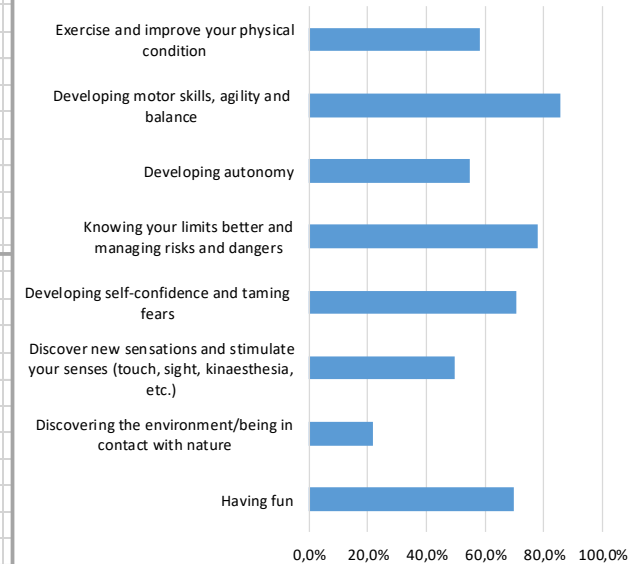
"Watch your speed and slow down if necessary."

"That he's capable of it' and 'that he's already used a balance bike to ride in public spaces".

Perceived dangers



Perceived benefits



Exemple
of
results
for one
situation

Photo-based questionnaire



Parental Assessment of Benefits and of Dangers Determines Children's Permission to Play Outdoors

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Abstract: During the early years, children's outdoor play is dependent on parental supervision. Parents' perceptions are likely to influence what the child is permitted to do. To better understand the involved mechanisms in parents' decision making in such contexts, an online photo-based questionnaire was administered. The tool investigates, in different situations, parents and their children's experience, parents' perceptions, and permission to play. A total of 417 parents of children aged from 1.5 and 6.0 completed the questionnaire. Results showed that parents, overall, have a positive attitude towards outdoor play. Main concerns were about risk of injury but in most cases, perceived benefits outweigh perceived dangers. "Sawing wood" was the only situation with a negative benefits/dangers balance. A linear regression analysis revealed that permission to play outdoors is based on parental assessment of benefits and dangers. Perceived benefits appeared to have more influence on parental decision than perceived dangers, while perceived competence had only a small influence. The results also showed that parents' childhood experience of outdoor play was an important determinant for adults' perceptions, perhaps demonstrating intergenerational concerns, as outdoor play is in decline. To overcome a negative intergenerational effect on children's outdoor play, interventions and communication should focus on associated benefits.

Keywords: children; outdoor play; risky play; parents; perception; benefit-danger balance; decision-making; photo-based questionnaire

1. Introduction

A growing body of literature highlights that outdoor play is associated with many health, well-being, and developmental benefits for children [1–4], which often cannot be developed as optimally in an indoor environment [5]. The outdoor environment offers children large spaces and multiple opportunities for discovery that allow them to move, play, experiment, express themselves freely, and to assert their personality [6]. Outdoor play, especially when it takes place in a natural and stimulating environment, has been demonstrated to be effective in improving children's motor and physical skills [7], body schema, and self-confidence [8]. Moreover, interactions with nature during the early years have been shown to have a positive effect on connectedness with nature and environmentally friendly behaviour in the long term [9,10].

Unfortunately, opportunities for children's free outdoor play have been greatly reduced in recent decades [9–12]. This evolution is closely linked to rapid changes in society. There has been a significant increase in children's participation in supervised activities and an increased parental dependence on travel at the expense of unorganised outdoor activities [13]. Parental availability becomes a key factor in determining opportunities for outdoor play [14]. Moreover, screen time has become an increasingly important part of

Measured dimensions	Questions	Answers and scores				Mean scores (M), Standard deviation (SD) and internal consistency			
		0	1	2	3	M	SD	Alpha Cronbach	Omega McDonald's
Perceived benefits (PBen)	This activity seems beneficial for my child	Strongly disagree	Rather disagree	Rather agree	Completely agree	2.12	0.51	0.83	0.83
Perceived dangers (PDang)	This is a dangerous situation for my child	Strongly disagree	Rather disagree	Rather agree	Completely agree	1.29	0.47	0.74	0.74
Perceived competence (PComp)	My child is able to carry out this activity.	Strongly disagree	Rather disagree	Rather agree	Completely agree	2.13	0.43	0.73	0.74
Permission to play (PERM)	Would you give permission to your child to do this activity ?	No	Yes, under condition	Yes, without condition		1.06	0.28	0.73	0.74
Child experience (CExp)	Has your child ever experienced this kind of situation ?	No	Probably not	Probably yes	Yes	2.1	0.61	0.78	0.79
Parent experience (PExp)	Did you experience this type of activity when you were approximately your child's age?	No	Yes			0.74	0.22	0.72	0.72

Internal consistency

Results : comparing attitude toward situations



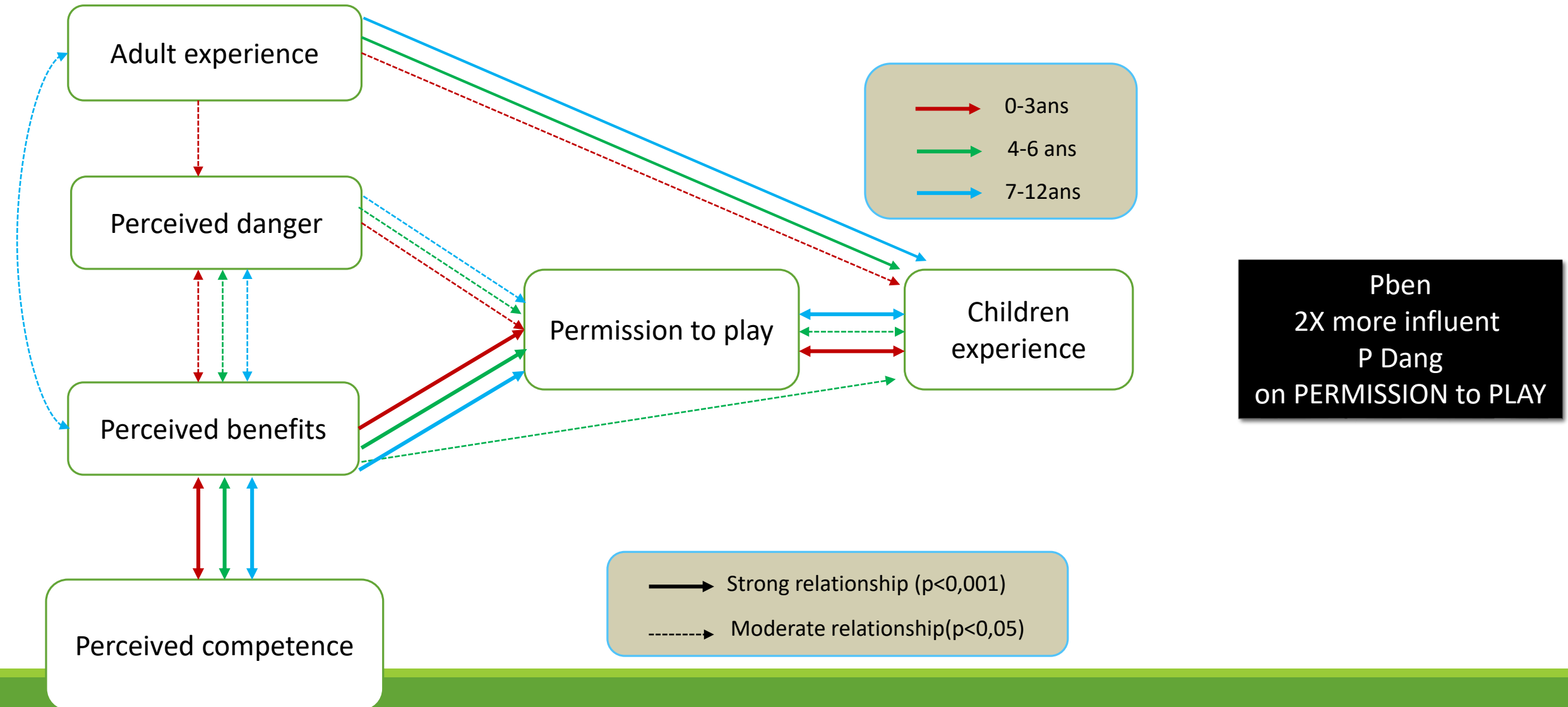
Results : relationships between dimensions

	CAge	CExp	PExp	PBen	PDang	PComp	PERM
CAge	1	.40**	.21**	.09	-.13*	.40**	.17**
CExp		1	.52**	.56**	-.34**	.67**	.50**
PExp			1	.42**	-.31**	.38**	.40**
PBen				1	-.55**	.66**	.75**
PDang					1	-.41**	-.60**
PComp						1	.58**
PERM							1

Table 4. Pearson coefficients of correlation between child age, parent and child experiences, parental perceptions and permission to play. Level of significance: * $p < 0.01$; ** $p < 0.001$.

Results : explaining permission to play

Multiple linear regression



Researches with Photo-based Questionnaire

Jidovtseff et al. (2020) Perception de L'investissement de L'espace Extérieur par les Enfants et les Jeunes et des Risques Liés à Celui-ci. Rapport ONE.

Parental & practitioner 1,5-18YO

Jidovtseff et al. (2022). Parental Assessment of Benefits and of Dangers Determines Children's Permission to Play Outdoors. *IJERPH*, 19(18), 11467.

Parental 1,5-6yo

McCrorie et al (2023) Risky outdoor play in the early years: How are parental and practitioner perceptions of danger and benefits associated with young children's outdoor play experiences? *Under submission*.

Parental & practitioner 2-5YO

Strength, limitation & perspectives

Original and **innovative** concept => investigate adults' **perceptions & decision making process**

Interesting : ability to question the parents on different situations, even when not experienced.

Minor improvements needed for scales

The **selection of the photos** is **critical** and may influence results.

Further researches :

- **how to conduct the selection of photos** according to the characteristics of the target population.
- **socio-cultural context** should be **investigated and considered**.
- **Technological perspective** with **Videos and/or virtual reality** to adults' immersive experience

So, will You permit him to play in the mud ?

