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Caregivers and stakeholders' priorities for research on young children's physical activity, health and development

Mingxuan Zhao

Jacinta Francis

Gina Arena

Maryam Sajjad

Hayley Christian

The Australian Research Council Centre of Excellence for Children and Families over the Life Course

Phone +61 7 3346 7477 **Email** lcc@uq.edu.au

lifecoursecentre.org.au

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Research Summary

Why was the research done?

Insufficient physical activity remains a major issue among children under 10 years globally, posing a significant public health challenge. Effective interventions, policy, and practice require a strong evidence base, yet research agendas are often shaped by academic or funding priorities rather than the needs of the communities they serve, particularly those experiencing hardship.

What were the key findings?

Parents/caregivers of children aged 0-10 years ranked screen time, types and amounts of physical activity that best support health and development, environmental supports (nature/public open spaces, street safety, home yards) and equity for priority populations as key priorities for children's physical activity, health and development. While their priorities overlap, parents/caregivers emphasised daily support, whereas stakeholders emphasised system-level solutions and translation of research.

What does this mean for policy and practice?

The study presents the first Australian top 10 research priorities for young children's physical activity, health and development from the perspective of parents/caregivers and stakeholders, considering children experiencing hardship. This co-produced agenda provides direction for future research, policy and practice targeting early childhood, a critical window for establishing movement behaviours and developmental trajectories over the lifetime.

Citation

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The authors

Mingxuan Zhao
The Kids Research Institute Australia, Perth, Western Australia, Australia.
Email: Ming.Zhao@thekids.org.au
https://www.thekids.org.au/contact-us/our-people/z/ming-zhao/

Jacinta Francis
The Kids Research Institute Australia, Perth, Western Australia, Australia.
Email: Jacinta.Francis@thekids.org.au
https://www.thekids.org.au/contact-us/our-people/f/jacinta-francis/

Gina Arena
The Kids Research Institute Australia, Perth, Western Australia, Australia.
Email: Gina.Arena@thekids.org.au
https://www.thekids.org.au/contact-us/our-people/a/gina-arena/

Maryam Sajjad
The Kids Research Institute Australia, Perth, Western Australia, Australia.
Email: Maryam.Sajjad@thekids.org.au

Hayley Christian
The Kids Research Institute Australia, Perth, Western Australia, Australia.
Email: Hayley.Christian@thekids.org.au
https://www.thekids.org.au/contact-us/our-people/c/hayley-christian/

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We acknowledge the Traditional Custodians of the lands on which we work and live across Australia. We pay our respects to Elders past and present and recognise their continued connections to land, sea and community.

Abstract

Insufficient physical activity remains highly prevalent among children under 10 years globally, posing a significant public health challenge. Effective interventions, policy, and practice require a strong evidence base, yet research agendas are often shaped by academic or funding priorities rather than the needs of the communities they serve, particularly those experiencing hardship.

This study used a modified James Lind Alliance methodology to identify research priorities for young children's physical activity, health and development, with considerations for children experiencing hardship. Two key groups were engaged across Australia: parents/caregivers of children aged 0-10 years, and stakeholders across government, education, healthcare, and community organisations. Both groups completed two surveys, and parents/caregivers attended an in-person consensus workshop.

A total of 27 themes were generated from 570 parent/caregiver responses, and 26 themes from 345 stakeholder responses. The top 22 parent/caregiver themes were progressed to the consensus workshop, where parents/caregivers reviewed and ranked them by whole-group consensus. Parents/caregivers ranked screen time, types and amounts of physical activity that best support health and development, environmental supports (nature/public open spaces, street safety, home yards) and equity for priority populations as key priorities. While their priorities overlap, parents/caregivers emphasised daily support, whereas stakeholders emphasised system-level solutions and translation of research.

The study presents the first Australian top 10 research priorities for young children's physical activity, health and development from the perspective of parents/caregivers and stakeholders, considering children experiencing hardship. This co-produced agenda provides direction for future research, policy and practice targeting early childhood, a critical window for establishing movement behaviours and developmental trajectories over the lifetime.

Introduction

The development of healthy behaviours such as physical activity in early childhood creates the foundation for lifelong wellbeing, influencing health and developmental trajectories across childhood and into adulthood (Carson et al., 2017; Draper et al., 2024; Jones et al., 2013). Physical activity offers benefits across physical, cognitive, and psychosocial domains from childhood to adolescence (Cai et al., 2025). Despite its importance, global trends continue to show a high prevalence of sedentary behaviour and insufficient physical activity among preschoolers (Chong et al., 2024) and children under the age of ten (Steene-Johannessen et al., 2020). This presents a significant public health challenge with implications that extend to chronic disease prevention and health equity in children and across the life course (Wu et al., 2023). Addressing these challenges requires a strong evidence base to guide effective interventions, policy and practice. However, traditional research agendas have often been guided by academic or funding priorities, which may overlook the questions most relevant to the communities they aim to support (Makey et al., 2023). This gap can lead to research that does not translate into practical solutions, reducing its real-world impact and contributing to unsustainable research (Price et al., 2022; Shuttleworth et al., 2026; Ziegahn et al., 2020).

Research priority setting has gained prominence to ensure that limited research resources are focused on the issues that matter most to those affected including those with lived experience (World Health Organization, 2025). By bringing people together to co-produce and build knowledge, community engagement helps identify key evidence gaps and strengthen community ownership, creating more effective pathways for translating research into better health outcomes (Hall-Clifford et al., 2024). Understanding the research needs of young children requires a

holistic approach that involves parents, caregivers, and other key stakeholders into the research process (Zarin et al., 2025). Engaging these groups provides a more comprehensive understanding of the challenges faced by young children and their families and their priorities for future research. Their involvement enhances the ethical and practical relevance of research and ensures that resulting research questions are grounded in real-world experiences and needs (Shuttleworth et al., 2026).

The James Lind Alliance (JLA) framework provides a rigorous and inclusive structure for research priority setting, bringing together community members, parents, caregivers, and professionals to identify the research questions that matter most to them (Reay et al., 2014). This framework was applied within the context of physical activity, health, and development for children under the age of ten, to enable the perspectives of parents, caregivers, and other stakeholders to guide scientific priorities for those who it matters for most. Their lived experience input can help determine more meaningful research gaps and ensures that the agenda developed is responsive, relevant and grounded in the everyday realities of the families and communities it is designed to support.

We embedded a modified JLA framework (Reay et al., 2014) within the Australian context of children's physical activity, health and development to co-produce a community-driven research agenda. The aim was to identify, refine and prioritise research questions that reflect the lived experience alongside scientific expertise, to set the strategic framework for the next decade to guide research on young children's physical activity, health and wellbeing.

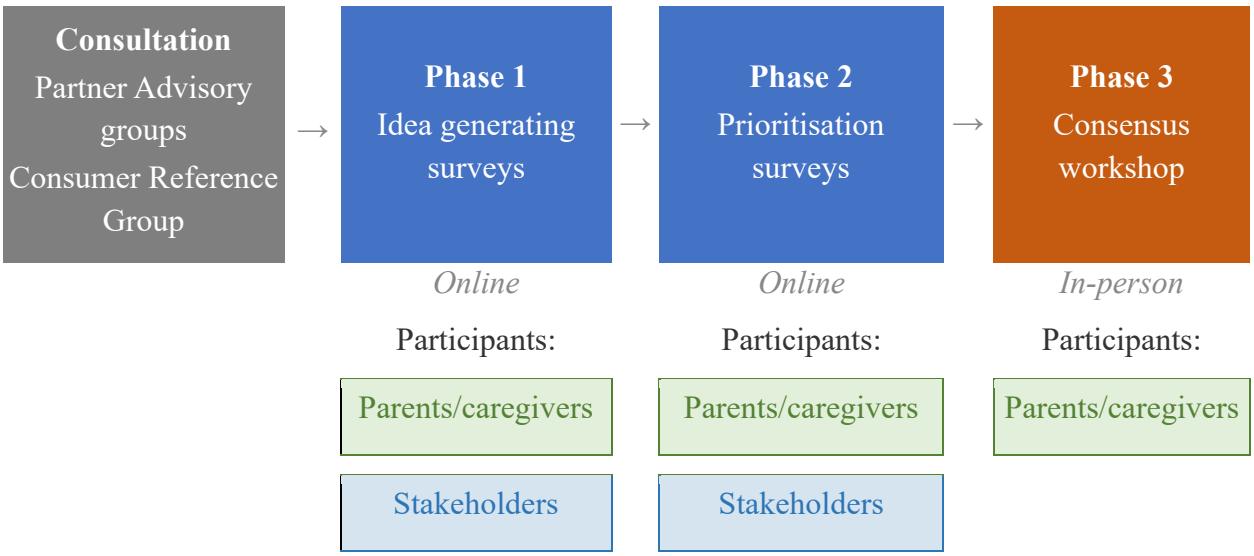
Methods

A modified James Lind Alliance methodology was used with input from the research team in consultation with Partner Advisory Groups, and Community Engagement at the Kids Research Institute Australia (Boney et al., 2015; Taylor et al., 2025). The study focused on research priority setting in the area of 'children's physical activity, health and development', engaging two key groups: parents or caregivers of children aged 0-10 years and stakeholders working across government, education, healthcare, research and community organisations. Ethics approval was obtained from the University of Western Australia Ethics Office (2020/ET000353).

Study design

The study was divided into three phases: an idea-generating phase, a prioritisation phase, and a consensus workshop (Figure 1). All survey data were collected and managed using REDCap electronic data capture tools (Harris et al., 2019). Participants provided consent via the first online survey and acknowledged that they had read the participant information sheet. Prior to commencing the consensus workshop, participants were also provided with the participant information sheet and signed a consent form. Parents/caregivers who completed both surveys were entered into a draw to win a $100 gift card. Participants who attended the consensus workshop received $150 for their time, in line with consumer involvement in research best practice. The eligibility criteria for the surveys required that participants must be parents/caregivers or stakeholders and must reside in Australia. Additionally, for the consensus workshop, participants needed to reside in Perth (Western Australia) to attend the in-person workshop.

Figure 1. Overview of the research priority setting study process.



Participant recruitment

The initial parent/caregiver survey (idea generating) was disseminated through a nationwide targeted paid social media campaign (Facebook and Instagram), posters distributed within the Perth Children's Hospital, and e-newsletters through the Australian Research Council Centre of Excellence for Children and Families Over the Life Course network and to the research team's PLAYCE cohort study parents network (n=484) (Christian et al., 2025). The initial stakeholder survey (idea generating) was also disseminated through a nationwide targeted paid social media campaign (Facebook and Instagram) and invitation to over 315 government and non-government organisations through the research team's network of partners and via their Partner Advisory Group's network.

Consensus workshop participants were recruited via the parent/caregiver idea-generating and prioritisation surveys. Further recruitment included notices at a local community centre, posts on the social media (Facebook, Instagram), and sharing through partner organisation networks.

Workshop participants included parents/caregivers who completed both surveys as well as those who had not completed either survey.

Ideas collection and synthesis of top 10 research priorities

Idea generating surveys

The idea generating surveys consisted of four open-ended questions focused on identifying key research areas for improving young children's physical activity, health and development. Community challenges, especially for children experiencing hardship, were also explored (see Supplementary Table 1). These questions were designed with input from the team's Partner Advisory Groups and Consumer Reference Group. Sociodemographic information on age, gender, ethnicity and relationship with child they were reporting on (for parent/caregiver survey) or professional connection to children (for stakeholders) was collected.

Ideas from parents/caregivers and stakeholders were collated separately and coded into themes. Themes were developed based on the similarity of responses and guided by an exposure and outcome framework, drawing on the socio-ecological model (Stokols, 1996). Responses were organised and coded in Excel and NVivo (Lumivero, 2025). Two members of the research team independently reviewed the responses, removing out-of-scope ideas and grouping repetitive ideas, with feedback from other team members through iterative discussion and refinement of the emerging themes.

Prioritisation surveys

Respondents of the idea-generating surveys were also invited to complete the prioritisation surveys if they had registered their interest in the prior idea generating survey. Prioritisation surveys included the ranking of collated research themes separately for parents/caregivers and stakeholders. Participants were asked to select their top ten research ideas in any order. Research themes were then ranked based on the number of times they were selected.

Consensus workshop

Parents/caregivers were invited to a consensus workshop to discuss the preliminary ranking of the research themes and to determine the final 'Top 10 priorities' for future research on children's physical activity, health and development. The four-hour in-person workshop was conducted on a weekend day in a central Perth suburb (Western Australia). At the start of the workshop, the facilitator briefed participants on the study and emphasised the importance of collaboration to achieve the intended workshop objectives. The workshop was structured to ensure that all participants' views were heard and that sufficient time was provided for the group to reach consensus on the final ranking of the research ideas (see Supplementary Table 2 for workshop agenda).

Results

Socio-demographic characteristics of participants across the three data collection phases

Parents/Caregivers

In the caregiver idea-generating survey, almost all participants were parents (98.7%), female (92.3%), and aged between 26 and 50 years (99.4% cumulatively) (Table 1). The majority held a university or postgraduate degree (82.8%). A small proportion identified as Aboriginal or Torres Strait Islander (9.0%), with most participants only speaking English at home (78.3%) and residing in metropolitan areas (74.5%). A further 24.2% resided in regional, rural, or remote areas. The majority of households had children aged 10 years or under (94.9%).

Table 1. Socio-demographic characteristics of participating parents/caregivers across the three data collection phases

Characteristics	Idea Generating Survey (n=157)	Prioritisation Survey (n=99)	Consensus Workshop (n=21)
Connection to child, n (%)[a]			
Parent	155 (98.7%)	97 (98.0%)	16 (76.2%)
Caregiver	3 (1.9%)	2 (2.0%)	3 (14.3%)
Other family	15 (9.6%)	10 (10.1%)	0
Other (e.g. teacher, coach)	14 (8.9%)	13 (13.1%)	2 (9.5%)
Missing	0	0	5 (23.8%)
Age, n (%)			
18–25 years	1 (0.6%)	1 (1.0%)	0
26–35 years	61 (38.9%)	36 (36.4%)	3 (14.3%)
36–50 years	95 (60.5%)	62 (62.3%)	14 (66.7%)
Missing	0	0	4 (19.1%)
Gender, n (%)			
Female	145 (92.3%)	93 (93.9%)	17 (81.0%)
Male	11 (7.0%)	5 (5.1%)	0
Non-binary	1 (0.6%)	1 (1.0%)	0

Missing	0	0	4 (19.0%)
Indigenous status, n (%)			
Not Indigenous	140 (89.2%)	89 (89.9%)	16 (76.2%)
Aboriginal	10 (6.4%)	7 (7.1%)	0
Torres Strait Islander	2 (1.3%)	1 (1.0%)	0
Both	2 (1.3%)	0	0
Prefer not to say	3 (1.9%)	2 (2.0%)	1 (4.8%)
Missing	0	0	4 (19.0%)
Education, n (%)			
No qualification	1 (0.6%)	0	0
Year 10 or equivalent	1 (0.6%)	1 (1.0%)	0
Year 12 or equivalent	5 (3.2%)	5 (5.1%)	2 (9.5%)
Trade/Certificate	10 (6.4%)	5 (5.1%)	2 (9.5%)
Diploma	9 (5.7%)	5 (5.1%)	2 (9.5%)
University degree	58 (36.9%)	36 (36.4%)	2 (9.5%)
Postgraduate degree	72 (45.9%)	46 (46.5%)	9 (42.9%)
Prefer not to say	1 (0.6%)	1 (1.0%)	0
Missing	0	0	4 (19.0%)
Households with children ≤ 10 years, n (%)			
Households with children aged ≤10 years	149 (94.9%)	92 (92.9%)	14 (66.7%)
Households with children aged >10	5 (31.8%)	4 (4.0%)	2 (9.5%)
Missing	3 (1.9%)	3 (3.0%)	5 (23.8%)
Language spoken at home, n (%)			
English only	123 (78.3%)	76 (76.8%)	9 (42.9%)
Language other than English	32 (20.4%)	22 (22.2%)	7 (33.3%)
Prefer not to say	2 (1.3%)	1 (1.0%)	0
Missing	0	0	5 (23.8%)
Area of residence, n (%)			
Metropolitan	117 (74.5%)	71 (71.7%)	16 (76.2%)
Regional/Rural	35 (22.3%)	25 (25.3%)	0
Remote	3 (1.9%)	2 (2.0%)	0
Other	0	0	0

Prefer not to say	0	0	0
Missing	2 (1.3%)	1 (1.0%)	5 (23.8%)

[a]Multiple response permitted. Percentage may sum to more than 100%.

Stakeholders

In the idea-generating survey, most participants identified as either health professionals or educators (n=48, 53.9% cumulatively), with academics and government or policy workers comprising a further 32.6% (n=29) (Table 2). Most participants were female (n=76, 85.4%) and many were aged between 36 and 50 years old (n=40, 44.9%). A small proportion identified as Aboriginal or Torres Strait Islander (n=6, 6.8%). Most participants' organisations were based in Western Australia (n=63, 70.8%) and operated across metropolitan (n=70, 78.7%) and regional, rural, or remote areas (n=57, 64.1% cumulatively). A large proportion of stakeholders had worked in their role for more than 10 years (n=64, 71.9%).

Table 2. Socio-demographic characteristics of participating stakeholders across the three ideas collection phases

Characteristic	Idea Generating Survey (n=89)	Prioritisation Survey (n=47)
Age, n (%)		
26–35 years	16 (18.0%)	9 (19.1%)
36–50 years	40 (44.9%)	19 (40.4%)
51+ years	32 (36.0%)	18 (38.3%)
Prefer not to say	1 (1.1%)	1 (2.1%)
Gender, n (%)		
Female	76 (85.4%)	39 (83.0%)
Male	12 (13.5%)	8 (17.0%)
Prefer not to say	1 (1.1%)	0
Indigenous status, n (%)		
Not Indigenous	83 (93.3%)	44 (93.6%)
Aboriginal	3 (3.4%)	1 (2.1%)
Torres Strait Islander	0	0
Both	3 (3.4%)	0
Prefer not to say	0	2 (4.3%)

Role, n (%)[a]		
Health professional	25 (28.1%)	11 (23.4%)
Educator	23 (25.8%)	14 (29.8%)
Government or policy	11 (12.4%)	5 (10.6%)
Community worker	9 (10.1%)	7 (14.9%)
Academic	18 (20.2%)	13 (27.7%)
Other	17 (19.1%)	9 (19.1%)
Prefer not to say	2 (2.3%)	0
Years in role, n (%)		
<1 year	3 (3.4%)	0
1–5 years	9 (10.1%)	4 (8.5%)
6–10 years	10 (11.2%)	4 (8.5%)
>10 years	64 (71.9%)	37 (78.7%)
Missing	3 (3.4%)	2 (4.3%)
State/Territory, n (%)[a]		
ACT	4 (4.5%)	2 (4.3%)
NSW	12 (13.5%)	6 (12.8%)
NT	5 (5.6%)	2 (4.3%)
QLD	10 (11.2%)	6 (12.8%)
SA	7 (7.9%)	5 (10.6%)
TAS	6 (6.7%)	2 (4.3%)
VIC	12 (13.5%)	7 (14.9%)
WA	63 (70.8%)	33 (70.2%)
Prefer not to say	2 (2.2%)	1 (2.1%)
Area of operation, n (%)[a]		
Metropolitan	70 (78.7%)	38 (80.9%)
Regional/rural	37 (41.6%)	21 (44.7%)
Remote	20 (22.5%)	9 (19.1%)
Other	5 (5.6%)	2 (4.3%)
Prefer not to say	1 (1.1%)	0

[a]Multiple response permitted, percentage may sum to more than 100%

Idea generation of research priorities for young children's physical activity, health and development

Parents/Caregivers

A total of 157 participants took part in the parents/caregivers idea-generating survey, all of whom completed at least two out of the four open-ended questions. This generated a total of 598 ideas of research priorities. Of these, 18 ideas were classified as out-of-scope (e.g., supplement use in pregnancy, child teeth structure). A total of 27 themes were generated from the 570 eligible responses (Table 3). These included the influence of various socio-ecological exposures on children's physical activity, health and development, across multiple levels: including at the child level (e.g., screen time/devices, healthy eating, risky play, additional needs), social level (e.g., parents and families, siblings and peers, communities), neighbourhood level (e.g., nature/public open spaces, street safety, home yards, climate change and urbanisation), and societal level (e.g., policy/government, age-appropriate guidelines, inequities, access to information and services).

Table 3. Priority themes from parent/caregiver and stakeholder idea-generating surveys with frequency of prioritisation

Priority theme	Parent/carer (count)	Stakeholder (count)
Links between screen time/devices/gaming/social media on children's physical activity, development, and health	65	32
Awareness, communication, and implementation of physical activity guidelines for children at different ages	59	14
Children's physical activity and its influence on development and health	49	18
Role of nature/public open spaces on children's physical activity, development, and health	48	25
Children's risky play and active risk-taking	47	—

Priority theme	Parent/carer (count)	Stakeholder (count)
Role of parents and families in supporting children's physical activity, development, and health	46	33
Addressing inequities (socioeconomic status, cultural background, ethnicity, LGBTQ+ identity, rural/remote, refugee, trauma, etc.) around children's physical activity, development, and health	44	19
Ways to encourage and support children's physical activity	43	—
Links between nutrition/healthy eating and children's physical activity, development, and health	42	22
Reducing barriers to children's physical activity	41	21
Physical activity for children with additional needs (e.g. hyper mobility, developmental delay, disability, neurodiversity)	40	20
How can access to reliable, evidence-based information on child physical activity, development, and health be improved	38	10
Role of communities in supporting children's physical activity, development, and health	34	21
How can policy/government programs best support children's physical activity, development, and health	33	12
Access to services (e.g. health care, education) to support children's physical activity, development, and health	33	—
Role of street safety on children's physical activity, development, and health	32	9
Children's involvement in decisions around their physical activity, development, and health	30	19
Role of education and childcare in supporting children's physical activity, development, and health	29	21
Role of home yards on children's physical activity, development, and health	27	13
Role of siblings in children's physical activity, development, and health	26	—
Role of climate change, urbanisation on children's physical activity, development, and health	23	18
Role of peers in children's physical activity, development, and health	21	—
Role of indoor play spaces on children's physical activity, development, and health	15	—
Role of grandparents in children's physical activity, development, and health	15	—

Priority theme	Parent/carer (count)	Stakeholder (count)
Role of transport and accessibility on children's physical activity, development, and health	13	4
Child gender/sex and physical activity	11	6
Influence of COVID on children's physical activity, development, and health	8	—
Cross-sector collaboration and system-level approaches to support children's physical activity, development, and health	—	28
How best to translate research on children's physical activity, development, and health into policy and practice	—	23
Age-specific needs, school/developmental transitions and children's physical activity	—	20
Effective, context-sensitive, holistic approaches to support children's physical activity	—	19
Culturally responsive and inclusive approaches to support children's physical activity, development, and health	—	17
Role of housing on children's physical activity, development, and health	—	7
Promoting children's active travel to school	—	5

Note. "—" indicates the theme was not applicable for that participant group.

Stakeholders

A total of 89 participants took part in the stakeholder idea-generating survey**,** all of whom completed at least three of the four open-ended questions. This generated a total of 347 ideas of research priorities, with two ideas classified as out-of-scope (e.g., social atomisation, breastfeeding). A total of 26 themes were generated from the eligible responses (Table 3). These themes identified very similar socio-ecological exposures spanning across the child (e.g., screen time/devices, additional needs), social (e.g., parents and families, communities), neighbourhood (e.g., nature/public open spaces, street safety, home yards, climate change and urbanisation), and societal levels (e.g., policy/government, inequities). However, stakeholders prioritised supporting

not only the child, but also families and communities, alongside considerations of how policies/programs can provide support, including cross-sector collaboration and system-level, holistic approaches. There was also a strong emphasis on research translation.

Prioritisation of research priorities for young children's physical activity, health and development

Parents/Caregivers

The 27 themes identified from the parents/caregivers idea-generating survey formed the prioritisation survey, with participants asked to select up to 10 priorities from the 27 themes. A total of 99 parents/caregivers responded (see Table 1 for socio-demographic characteristics), selecting between 3 and 10 priorities, with 22 participants suggesting an 'other' response. Table 3 presents the count of priorities selected by parents/caregivers. The three top priorities were the impact of screen time/devices/gaming/social media on children's physical activity, health and development (n=65); types and amounts of physical activity that are best for children at different ages (e.g. babies, toddlers, preschoolers) (n=59); and children's physical activity and its influence on health and development (n=49).

Stakeholders

The 26 themes identified from the stakeholders idea-generating survey formed the prioritisation survey, with participants asked to select up to 10 priorities from the themes. A total of 47 stakeholders responded **(**Table 2), all selecting 10 priorities, with 26 suggesting an 'other' response. The top three stakeholder priorities included how parents and families can be supported to foster healthy behaviours in children (n=33); the impact of screen

time/devices/gaming/social media on children's physical activity, health and development (n=32); and cross-sector collaboration and system-level approaches to support children's physical activity, health and development (n=28).

Consensus on research priorities for young children's physical activity, health and development

A consensus workshop was held in November 2025 and attended by 21 parents/caregivers (Table 1). Only the top 22 parent/caregiver priority themes identified from the prioritisation survey were included in the workshop to ensure a focused and feasible process. Small groups of parents/caregivers reviewed the 22 themes, discussed whether anything was missing, and combined and reworded four themes to produce 19 provisional research priorities. The second round of small group discussions involved parents/caregivers ranking the provisional priorities. The final ranking of the top 15 research priorities was determined by consensus through a whole group discussion (Table 4). Stakeholder prioritisation themes were made available for parents/caregivers to reference at the workshop but not formally incorporated into the process to prioritise parents/caregivers perspectives.

Table 4. Top 15 child physical activity, health, and development research priorities as ranked in the consensus workshop

Rank	Top 10 child physical activity, health, and development research priorities
1	Links between screen time/devices/gaming/social media and children's physical activity, development, and health
2	Physical activity for children with additional needs (e.g. hyper mobility, developmental delay, disability, neurodiversity)
3	How parents and caregivers can best support children's physical activity, development, and health
4	Access to services (e.g. health care, education) to support children's physical activity, development, and health

5	Role of nature/public open spaces and home yards on children's physical activity, development, and health
6	Children's risky play and active risk-taking
7	Role of climate change and urbanisation on children's physical activity, development, and health
8	Role of siblings and peers in children's physical activity, development, and health
9	Access to support and resources for ALL families (regardless of socioeconomic status, cultural background, ethnicity, geographic location) and children's physical activity, development, and health
10	Role of street safety on children's physical activity, development, and health
Rank	**Top 11-15 research priorities**
11	Children's involvement in decisions around their physical activity, development, and health
12	How communities can best support children's physical activity, development, and health
13	How policy/government can best support children's physical activity, development, and health
14	How early learning and education centres and schools can best support children's physical activity, development, and health
15	Types and amounts of physical activity that are best for children of different ages and capacities

Discussion

The study presents the first Australian top 10 research priorities for young children's physical activity, health and development from the perspective of end users, parents/caregivers and stakeholders, providing a community-driven research agenda for children aged under 10 years. Parents/caregivers and stakeholders independently ranked issues such as screen time, the types and amounts of physical activity that best support health and development, environmental supports (nature/public open spaces, street safety, home yards) and equity for priority populations as key research priorities. Screen time emerged as the top priority for both parents/caregivers and stakeholders, yet their perspectives had a different focus. Parents/caregivers prioritised daily support (access to help, services, risky play), whereas stakeholders placed a higher priority on cross-sector and system-level solutions and translating research into policy and practice. Focusing on children under 10 years old is important because early childhood is a critical window for establishing movement behaviours and developmental trajectories, yet prior research priority-setting efforts to date have focused on more narrow topics (i.e., active travel) highlighting the value of a broader, co-produced agenda centred on young children and end-user priorities (Beck et al., 2021).

The top 10 child physical activity, health and development research priorities fall under four interconnected research priority areas, each of which is discussed below: Specific child physical activity related behaviour; Equity (additional needs and priority populations); Environmental supports; and Parent/caregiver supports.

Digital media and screen-based behaviours emerged as a key research priority area, with participants emphasising the impact of screen time, gaming and social media use on young children's physical activity, and development and health. Existing evidence indicates higher levels of screen time are associated with reduced moderate-to-vigorous physical activity, disrupted sleep patterns and poorer psychosocial outcomes in early and middle childhood (Torres et al., 2025). Interactive digital platforms and active games can support motor skill development and light to moderate movement in certain ages and settings, but their benefits depend on child developmental stage and context (Liu et al., 2020). Research priorities should focus on multi-level strategies that support children, families and communities to navigate digital environments, as well as evidence-based guidelines that consider diverse populations, with cross-sector collaboration to translate findings into scalable interventions. Risky play was also identified as a research priority by parents/caregivers. Previous research has shown that parental attitudes towards children taking risks at play are related to children's physical activity levels (Jerebine et al., 2024). Although risky outdoor play may increase likelihood of injury, systematic review suggests risky outdoor play can promote children's healthy development (Brussoni et al., 2015). Future research should further explore how risky play can be safely supported across settings and populations.

Participants emphasised the importance of equity across multiple dimensions, reflecting growing recognition in the literature that physical activity interventions must address systemic barriers and unequal access to resources (Heuvelman et al., 2026). Research priorities focused on promoting physical activity for children with additional needs, including those with hypermobility, developmental delay, disability, and neurodiversity, alongside ensuring equitable

access to supports and resources for all families, irrespective of socio-economic status, culture, ethnicity, or geographic location. This aligns with recent systematic reviews demonstrating that children from disadvantaged communities face compounding barriers to physical activity participation, including limited access to safe spaces, culturally appropriate programming, and specialised support (Hesketh et al., 2017; McKenzie et al., 2021). Research also shows that children with disabilities experience significantly lower rates of physical activity participation compared to their typically developing peers, often due to environmental barriers, lack of inclusive programming, program and staff capacity and cost (Columna et al., 2020; McKenzie et al., 2021). Socioeconomic inequities also create additional layers of exclusion, with disadvantaged families having reduced access to organised sports, recreational facilities and transportation to physical activity venues (Owen et al., 2022). The intersection of these factors; disability status, cultural background, and economic disadvantage, creates complex barriers that require targeted and strategic approaches. Achieving equity requires addressing individual-level barriers while also transforming systems and policies to ensure inclusive, accessible and culturally appropriate physical activity opportunities are available to all.

Environmental influences emerged as a key research priority area, with participants prioritising the importance of natural and private outdoor spaces, the impacts of climate change and urbanisation and neighbourhood street safety as key priorities for young children's physical activity, health and development. Access to parks, nature-based play and home yard space facilitates active play and provides developmental benefits (Christian et al., 2026; Christian, 2025), while rapid urbanisation and climate-related extremes (heat, air quality, flooding) limit opportunities to safe outdoor time and may increase inequities in play opportunities (Draper et

al., 2024). Together these parent/caregiver and stakeholder priorities suggest further research is needed to: evaluate natural as well as climate resilient play spaces and streetscape interventions; develop, implement and evaluate child-centred urban planning policies; and traffic-calming measures to protect and expand everyday opportunities for young children's physical activity.

Parent/caregiver focused supports were identified as central to enabling children's physical activity, health and development, with research priorities focused on how parents/caregivers can effectively promote children's physical activity, families' access to health and education services to support children's physical activity, health and development, and a greater understanding of the role and influence of siblings and peers in supporting young children to be active. Evidence from a recent pooled analysis across 33 countries highlights the important role of caregivers' in shaping young children's physical activity patterns and development trajectories (Chong et al., 2024). Other early years research highlights that aligned health, education and family supports amplify the long-term benefits of physically activity in young children (Draper et al., 2024). Co-production and service-integration approaches are needed to guide future research on young children's physical activity, health and development. Specifically, implementation trials and process evaluations to test caregiver-facing interventions (education, behaviour-change supports, navigation tools), mixed-methods research on barriers to service access, and social-network studies to better understand sibling/peer influences for active behaviour change (Taylor et al., 2025; Zarin et al., 2025). From the stakeholder perspective, policy and practice-based organisations should fund integrated service models, embed evidence-based physical activity guidance into routine child health and early-childhood education care (ECEC) and provide

accessible delivery options (subsidised or sliding-scale programs, transport support flexible hours) to reduce inequities in uptake (Shuttleworth et al., 2026).

Five further research priorities ranked between 11-15 emphasised child participation in physical activity decisions, strengthening community and policy support for physical activity, increasing ECEC involvement and defining optimal types and amounts of physical activity. These priorities connect individual and family level needs with system level approaches, aligning with the top 10 research priorities and guiding future physical activity research.

Strengths and limitations

This study applied a formal research priority setting process to the topics of 'child physical activity, health and development' producing a community driven agenda that can directly inform future research. The James Lind framework provided a validated structure for the priority setting steps, providing rigor, transparency and comparability with other established priority setting research (De Paolis et al., 2025; Morelius et al., 2022). Engagement was strong across parent/caregiver and stakeholder groups with recruitment strategies designed to capture diverse perspectives and improve the representativeness across communities and settings.

This study has several limitations. The sample was drawn from a high socio-economic country (Australia) with an overrepresentation of participants from Western Australia, which may limit generalisability to lower socio-economic countries or other regions. As participants self-selected into the initial idea-generating survey, a formal response rate cannot be calculated, introducing potential selection bias. Additionally, stakeholders did not participate directly in the final in-

person consensus workshop, given it was intentionally designed to centre the voices and priorities of parents and caregivers. Stakeholder views were presented to consensus workshop participants as contextual information, and informed interpretation of priorities particularly those related to research translation and implementation. Their absence from the final deliberation may have influenced the relative weighting of system and policy level priorities.

Conclusion

This study demonstrates the value of formal research priority setting for child physical activity, health and development by producing a community and stakeholder driven agenda that can guide future research, policy, and practice. Using the James Lind framework ensured a rigorous, transparent process comparable with other priority setting exercises. Strong engagement from parents/caregivers and stakeholders supports the relevance of the results. To our knowledge, this is the first published study to set and communicate national research priorities specifically for child physical activity, health and development with an explicit focus on children under 10 years old.

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Declaration of Interest

The authors report no conflict of interest.

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Supplementary materials

Supplementary Table 1. Open-ended questions for the parents/caregivers and stakeholders idea-generating surveys

	Questions about research priorities on children's physical activity, health, and development
1	What key questions do you think future research should answer to support physical activity, health, and development in young children aged 10 and under?
2	What are the biggest challenges you or others in your community face when supporting young children's physical activity, health, and development?
3	Is there anything else you would like us to think about for future research into young children's physical activity, health, and development?
4	When thinking about children's physical activity, health, and development, what research topics or questions do you think are most important for communities experiencing hardship?

Supplementary Table 2. Parent/caregiver consensus workshop agenda

Time	Topic
5 mins	**Welcome and Acknowledgement of Country**
	Introductions and housekeeping
10 mins	**About the project**
	How today's workshop will work
40 mins	**Small group discussion #1: Review and discussion of themes** • Share with us what are the most and least important themes to you. • Are we missing anything that is important to you? • Are there any that can be combined?
5 mins	***Break – stretch your legs***
35 mins	**Whole group discussion #1: Sharing feedback from small groups** • General impressions of themes • Agreement on any additions
15 mins	***Break -tea/coffee refreshments***
40 mins	**Small group discussion #2: Small group ranking** • We will go back into our small groups and go through the reduced list of ideas putting them in order from what we think is the most important to least important as a group
10mins	***Break – stretch your legs***
40mins	**Whole group discussion #2: Agreeing on final 'Top 10' list**
10 mins	**Next Steps for Research and Thanks**
	Close