Exploring stakeholders' perceptions of the acceptability, usability, and dissemination of the Australian 24-hour movement guidelines for the early years

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Exploring stakeholders' perceptions of the acceptability, usability, and dissemination of the Australian 24-hour movement guidelines for the early years

Abstract
Background: Australian 24-Hour Movement Guidelines for the Early Years were recently developed. To maximize the uptake of the guidelines, perceptions of key stakeholders were sought. Methods: Thirty-five stakeholders (11% Aboriginal or Torres Strait Islander descent) participated in focus groups or key informant interviews. Stakeholders included parents of children aged 0-5 years, early childhood educators, and health and policy professionals, recruited using convenience and snowballing techniques. Focus groups and interviews were audio-recorded and transcribed verbatim. Data were analyzed inductively using thematic analysis. Results: There was general acceptance of the Movement Guidelines. The stakeholders suggested that the Guidelines were highly aspirational and needed to be carefully messaged, so parents did not feel guilty if their child was not meeting them. Stakeholders identified that the messaging needed to be culturally appropriate and visually appealing. Dissemination strategies differed depending on the stakeholder. Conclusion: Seeking stakeholder perceptions is an important process in the development of national Movement Guidelines. This study successfully examined stakeholders' perceptions regarding the acceptability, usability, and dissemination of the Australian 24-Hour Movement Guidelines. Effective and innovative strategies for maximizing compliance and uptake of the Guidelines should be prioritized.

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ABSTRACT

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Methods: 35 stakeholders (11% Aboriginal or Torres Strait Islander descent) participated in focus groups or key informant interviews. Stakeholders included parents of children aged 0-5 years, early childhood educators, and health and policy professionals, recruited using convenience and snowballing techniques. Focus groups and interviews were audio-recorded and transcribed verbatim. Data were analysed inductively using thematic analysis.

Results: There was general acceptance of the Movement Guidelines. The stakeholders suggested that the Movement Guidelines were highly aspirational and needed to be carefully messaged so parents did not feel guilty if their child was not meeting them. Stakeholders identified that the messaging needed to be culturally appropriate and visually appealing. Dissemination strategies differed depending on the stakeholder.

Conclusions: Seeking stakeholder perceptions is an important process in the development of national Movement Guidelines. This study successfully examined stakeholders’ perceptions regarding the acceptability, usability and dissemination of the Australian 24-hour Movement Guidelines. Effective and innovative strategies for maximising compliance and uptake of the Movement Guidelines should be prioritised.
BACKGROUND

There is considerable evidence demonstrating the benefits of adequate physical activity, low levels of sedentary behaviour and adequate sleep for health among children, including young children (birth to 5 years) (referred to here as the Early Years)\(^1\)\(^-\)\(^3\). In recent years, there has been a shift away from exploring these behaviours independently to examining the continuum of movement behaviours across a 24-hour period\(^2\)\(^,\)\(^4\)\(^,\)\(^5\). This shift acknowledges the importance of movement behaviours across a whole day and how these behaviours integrate with each other to influence health and developmental outcomes for children\(^4\). In 2017, Canada and Australia developed and co-released 24-hour Movement Guidelines for the Early Years\(^6\). New Zealand, South Africa, and the WHO used a 24-hour approach in the development of their guidelines which were released 2017, 2018, and 2019, respectively\(^7\)\(^-\)\(^9\). Other countries, such as USA and UK have recently released similar guidelines for the early years, however these only provide guidance on physical activity.

Despite the known importance of public health related guidelines, such guidelines are only effective if key stakeholders are aware of and use them\(^10\). Therefore, one of the key steps in the development of the Australian 24-hour Movement Guidelines was to engage key stakeholders in the evaluation of the appropriateness of the Movement Guidelines and identification of knowledge translation strategies\(^10\)\(^-\)\(^12\). Understanding the needs of key stakeholders can help with maximising compliance and uptake of the Movement Guidelines\(^13\)\(^,\)\(^14\) and ultimately the health of the target population\(^10\)\(^,\)\(^15\).
Only a few studies have reported consultations with stakeholders to explore needs, values or recommended dissemination strategies for public health related guidelines, however only one study has focused on the early years. Therefore, the aim of this study was to examine stakeholders’ perceptions of the Australian 24-hour Movement Guidelines for the Early Years, specifically their acceptability, usability and dissemination strategies during the development stage and prior to release of the Guidelines.

METHODS

Stakeholders

Thirty-five individuals participated in five focus groups (3-9 stakeholders per focus group) and five key informant interviews (1 participant per interview). The average age of stakeholders was 35.1 years (range: 17 – 56 years; SD = 9.1) and 33 of the 35 stakeholders identified as female. The majority of stakeholders (97%) reported English as their predominant language spoken at home, 89% had completed a post-secondary education and 11% self-identified as being of Aboriginal or Torres Strait Islander descent.

Stakeholders in the focus groups consisted of parents/caregivers from diverse socioeconomic and cultural backgrounds (e.g. high and low socio economic status (SES), Indigenous populations, culturally and linguistic diverse populations), and early childhood educators and health workers (including those who work with children with additional needs). Each focus group comprised stakeholders of similar backgrounds (e.g. parents and educators who identified as Indigenous n=5, health professionals who worked with families and children with additional needs n=3,
parents from low SES communities, n=3, parents from mid to high SES communities n=9, parents from culturally and linguistically divers communities n=10). Key informant interviews were held with a paediatrician, a general practitioner with a diploma in Child Health, a paediatric physiotherapist, a representative of the organisation leading the implementation of the National Quality Framework for early childhood education and care services in Australia, and a representative of a not-for-profit organisation representing long-day care owners and operators.

Key stakeholders were recruited through existing networks of the Guideline Development Group for the Australian 24-hour Movement Guidelines for the Early Years (referred from here as Movement Guidelines), as well as through snowballing techniques. Informed consent was obtained at the beginning of the interviews and focus groups, followed by a short demographic questionnaire. This study received ethical approval from the University of Wollongong Human Research Ethics Committee (HE 2017/164).

**Data collection**

Data were collected through semi-structured one-on-one telephone interviews and face-to-face focus groups. Each stakeholder was given a plain-text printed copy of the draft Movement Guidelines, which included the preamble and the guideline document, and were asked to read and familiarising themselves with the documents prior to the discussion. The open-ended discussions focused on: (i) acceptability of the Movement Guidelines; (ii) perceived importance and clarity of the Movement Guidelines and preamble; (iii) facilitators and barriers to implementation and dissemination; and (iv) dissemination and implementation strategies. Focus
groups and key informant interviews were conducted from late-May to mid-
September 2017 across three States in Australia: New South Wales (NSW), Victoria (Vic) and Western Australia (WA). Focus groups and interviews lasted on average 40 minutes and were conducted by four researchers (RMS, RAJ, HC and JS). Data were collected until saturation was perceived by the research team, that is, no new information emerged from the final two interviews.

**Analysis**

The audio-recordings from the interviews and focus groups were transcribed verbatim. To maintain confidentiality, stakeholder names were replaced using the terms Parent, Educator, Health Professional, Policy Professional and Researcher, along with the key informant interview (Int) or focus group (FG) number and corresponding Australian State (NSW, WA, Vic) in which the discussion group was held (e.g. Parent, FG1, NSW). Stakeholders are referred-to by these codes below. In line with the aims of this study, acceptability, usability, and dissemination were identified *a priori* as the key areas of focus. Then, for each of these aspects, the transcripts were analysed inductively using thematic analysis. This process followed the six phases recommended by Braun et al.: (i) familiarisation with the data; (ii) deriving codes from the data (i.e., succinct labels that captured key analytical ideas); (iii) searching for themes (i.e., clusters of similar codes which make up a broader level of meaning); (iv) reviewing themes; and (v) defining and naming themes, before (vi) producing the report (see below).

Strategies were implemented to ensure trustworthiness (e.g., quality and rigour) of the analysis. Peer debrief was conducted throughout the study via regular formal and
informal meetings between the lead researcher and each member of the research team (collectively and individually). Furthermore, a team approach to analysis was adopted, which enabled two co-authors to act as ‘critical friends’ 23. That is, the lead researcher (RMS) and two co-authors (RAJ and CS) read each transcript independently. Then, all three authors shared their interpretations, and offered critical feedback to the lead researcher (RMS), in order to encourage reflexivity, explore multiple/alternative interpretations, and ultimately enhance plausibility of the resulting analysis 23.

Results

Three broad themes were identified in the analysis of the focus group and key informant interview transcripts: (1) acceptability, (2) usability and (3) dissemination.

Acceptability

There was a general acceptance among all stakeholders that the Movement Guidelines were easy to understand and follow. All stakeholders favourably supported the integration of behaviours (i.e. physical activity, sedentary behaviour and sleep) and the division of the behaviours based on ages (i.e., infants, toddlers and pre-schoolers). Educators and other professionals suggested that allocating a ‘time’ length to each behaviour (e.g., three hours of physical activity and less than one hour of sedentary behaviour) was also beneficial as “this would provide a clear guide for parents” (Policy Professional, Int1, NSW). Stakeholders who were professionals suggested that the Movement Guidelines filled a gap in the information currently available and provided an opportunity to guide practice where guidelines and policy on early movement behaviour was currently limited. As one professional suggested:
“…They [early childhood (ECEC) educators] need something like this because they’re not thinking about physical activity. They’re thinking about sleep certainly, and they’re thinking about the types of food children are eating and how much time they’re spending outside, but they’re not thinking about that holistically with regards to physical activity.” (Policy Professional, Int2, WA)

Despite an overall acceptance of the Movement Guidelines, there were a few key areas that stakeholders suggested needed to be refined to ensure optimal uptake. The first area was the removal of movement behaviour-related jargon (e.g., ‘energetic play’, ‘cognitive development’, ‘cardiorespiratory’, ‘sleep hygiene’ etc). All stakeholders (including the health and policy professionals) suggested that such words may be difficult to understand for the general population. Stakeholders were particularly concerned about the understanding of such words for those from lower socio-economic backgrounds or those whose first language was not English:

...So I just think the language is really [hard], [it] runs the risk of people switching off and not even paying [attention], like not being able to understand it, avoiding going on with it...they’ll read down that preamble and get to some of that stuff, some of the language and just go ‘oh, I don’t even understand this’ and just put it away... or not read on anymore... (Policy Professional, Int1, NSW)

The second area of refinement identified by the stakeholders was the visual appeal of the Movement Guidelines. For the purposes of the consultations, stakeholders were provided with a plain-text draft of the Movement Guidelines as a black and white
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Although all stakeholders suggested that the times allocated to the different behaviours were helpful as a guide, parents and educators were concerned that the prescription of such behaviours may result in parents feeling guilty if they could not meet the recommended times; and not meeting the guidelines could reflect poorly on their parenting style. Although all parent and educator stakeholders expressed these concerns, they were predominantly expressed by Indigenous parents or parents from lower socio-economic demographics:

“Oh my God, get to sleep, what am I doing wrong?”, and they’ll take it personally, and go to all these different places and be like “Oh my God, what am I doing wrong, they’re not sleeping for the minimum of 10 hours” (Parent, FG2, WA)

Sometimes they might not know how, like they feel like “What can I do? I’ve got to work, and I’ve got to do this, like I need that time to cook the dinner, I
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need time”, you know, they might feel a bit helpless as to how they’re going to
achieve that (Parent, FG2, WA)

Usability

The Movement Guidelines were developed for Early Years stakeholders, with the
primary end users being parents and early childhood educators. Parents accepted the
content of the Movement Guidelines, however they suggested a number of barriers
that were likely to impede their usability. Time and poor weather were common
barriers mentioned. Competing interests of older siblings was also mentioned as a
potential barrier. For example, parents suggested that it would be more difficult for
children from larger families to participate in the prescribed movement behaviours as
younger children in such families are often driven around to other extra curricula
activities and often provided with a piece of technology to occupy themselves while
the activity was taking place: “They [the older children] go to gymnastics and you
can’t let them run around, you’ve got to sit. So we have to do iPad, which is fine, he
[younger child not involved in gymnastics] loves it.” (Parent, FG3, NSW)

The availability of technology-based devices within the home environment was also
suggested to be a significant confounder in terms of usability of the Movement
Guidelines. Parents suggested that technology is often the first point of entertainment
for young children and is regularly used as an ‘electronic babysitter’, rather than
involving children in other activities such as energetic play. A parent from the high
socio-economic focus group succinctly summarised these barriers:

Enough time in the day. I think the biggest challenge now is time, well a lot of
families are both working parents. Times are changing and everyone’s
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running in the door and in and out. There’s so much sport and outside stuff of school…I think for our family it’s the competing needs of various members of the family. That is an issue (Parent, FG3, VIC)

To aid the usability of the Movement Guidelines, parents suggested providing detailed examples of what these behaviours looked like in practice, for example, “what energetic play looked like” and “examples of how to reduce screen time” (Parent, FG1, NSW). Many parents had incorrect misconceptions of the movement behaviours. For example, a number of parents suggested that physical activity should involve children participating in costly structured physical activity, organised games or “making children running laps around an oval” (Parent, FG1, NSW). The provision of specific and detailed examples could potentially alleviate such misconceptions related to the movement behaviours.

In alignment with the suggestions from parents, early childhood educators also suggested that the usability of the Movement Guidelines would be influenced by the weather and time. Educators suggested that their time was limited due to the high demands of administration within ECEC settings, which often resulted in other activities being compensated. In addition, educators suggested that the usability of the Movement Guidelines would be significantly influenced by the underpinning philosophy of the ECEC setting. In Australia, ECEC services are guided by a number of different philosophies and curriculums, many of which prioritise the cognitive and social/emotional key learning domains rather than the physical domain: “...And for the childcare centres, I know they have certain parts of the curriculum they need to
adhere to, and if the curriculum’s demanding, then they put more focus on academic rather than physical activity” (Educator, Int, NSW)

Similar to parents, early childhood educators suggested that the addition of several broad reaching examples would be helpful in optimising usability, for example, use of music and flashcards. Specific examples of how the movement behaviours could realistically be incorporated in their day to day planning as well as integrated into other curriculum areas was also thought to be critical for maximising the usability. Some educators suggested that being accountable for implementation of the movement behaviours would be helpful, and thus practical ideas of how to include these behaviours in their planning was suggested to be important. As one educator suggested: “My way of thinking with this is that if we were to put this in our QIP [Quality Improvement Plan], and they come through and they say ‘Well, how are you doing that?... we’ve got no documentation.’” (Educator, FG4, WA)

Meaningful collaborations between parents and their children, parents/families and educators and between educators and the children in their care were identified as being critical for high usability. Professionals and parents involved in the stakeholder consultations suggested that the usability of the Movement Guidelines would be enhanced if parents were intentional in ‘role modelling’ the correct behaviours and being ‘play partners’ (i.e., joining in). One parent explained the impact of this on her family:

“Michael* and I joined in the other night. During family time, for 20 minutes, Simon’s* rule was that we had to run, George’s* rule was that we had to run laps around the house, holding our card and see who the winner was. And we
had a ball, Michael* and I, running. And I got breathless. It was vigorous.

(Parent, FG3, VIC)* Names are pseudonyms

Educators emphasised the importance of consistent messaging between the ECEC environment and the family environment. Ongoing education and awareness from both early childhood educators and parents of the importance and application of the movement behaviours was highlighted as necessary. There was concern from the stakeholders that it may be easier to educate educators in this regard but harder to educate families, for example:

But there needs to be more education around it. It’s easy to educate professionals who work with young children, but it’s harder to educate families obviously. (Policy professional, Int, WA)

“...it would be harder to try and get the parents on board with it...”

(Educator, FG4, WA)

Dissemination

Stakeholders identified a range of dissemination options. These were largely group-specific (i.e., dissemination options for parents were different from those for educators and professionals), however, there were some similar dissemination avenues across all groups. Parents suggested it would be most appropriate to receive information about the Movement Guidelines from health professionals and health services (such as child health nurses, support services). They suggested that they regularly consult with such professionals and would be willing to receive information
from such people. They also suggested that social media, apps/websites (e.g. Raising Children’s Network) and community groups (e.g., mother’s groups and play-based groups) would be key places for dissemination. Parents from the Indigenous parent group suggested face-to-face communication and discussions (e.g., yarn groups: small groups of people who gather to talk (or yarn) about a certain issue) would be helpful as these are culturally appropriate strategies for communicating information. As one parent suggested: “yes... have a yarn-up and communicate.”

Educators and professionals suggested that dissemination through evidenced-based websites and social media would be appropriate. Professionals suggested that they often referred to online resources for additional information and suggested that the information pertaining to the Movement Guidelines would be helpful to have online. Educators suggested that further education pertaining to the Movement Guidelines could be best disseminated through staff meetings whilst professionals suggested that receiving information about the Movement Guidelines through their specific professional societies, in-service courses and conferences would be most helpful.

**DISCUSSION**

This study explored the perceptions of key stakeholders and end users (parents, early childhood educators, policy and health professionals) regarding the acceptability, usability and dissemination of the Australian 24-hour Movement Guidelines for the Early Years (birth to 5 years). In summary, there was general acceptance of the Movement Guidelines among all stakeholders, however views relating to usability and dissemination varied between stakeholder groups. The general acceptance of the integrated behaviour model from all stakeholders was similar to that reported by the
In this study there was a discourse between professionals, educators and parents in relation to the usability of the Movement Guidelines. This was particularly noticeable in relation to the prescribed durations (e.g., 60 minutes of energetic play for preschool aged children etc.) for the behaviours. The health professionals, on the whole, suggested that the times were appropriate and recognised that such amounts would be needed for positive child health-related outcomes. In contrast, parents and educators, especially parents from lower socio-economic and Indigenous groups, suggested that the messaging around the recommended times children should spend in each behaviour could stimulate “feelings of guilt”. The reasons provided (e.g., time, work/family commitments) for not being able to achieve the Movement Guidelines are similar to those previously identified as key barriers to health behaviour change among Indigenous and low socio-economic populations. These findings are of concern as it was suggested that the parent guilt could potentially result in families not trying to adhere to the Movement Guidelines. To alleviate such potential feelings of guilt it is important that the preceding messaging and advertising associated with the Movement Guidelines is appropriate and clearly highlights that the recommendations in the Movement Guidelines are a guide, with the main message being that for greater health, 24 hours should include some screen time and lots of physical activity and even more sleep.
The discourse between parents, early childhood educators and professionals did not seem to be as definitive in the 24-hour Movement Guideline Canadian stakeholder consultations. The Canadian stakeholder consultations similarly involved a diverse group of stakeholders of whom the majority had completed post-secondary education. However, the current study included more Indigenous perspectives compared to the Canadian sample. The higher ratio of Indigenous parents and those from lower socio-economic backgrounds in the current study may have resulted in the more obvious discourse. With a growing demographic of families and early childhood educators from culturally and linguistically diverse backgrounds in Australia, language, wording and design considerations should be a priority.

Stakeholders in the current study identified a comprehensive list of potential dissemination resources, avenues and key messengers. However, these suggestions may only be effective if they are acted upon as part of a comprehensive knowledge translation and dissemination strategy. There may be little point in investing in the development of new guidelines or even having public health related guidelines if they are not done in conjunction with a well-resourced and longer term dissemination and implementation plan. Therefore resources should be made available for involving key stakeholders in the design and implementation of the Movement Guidelines dissemination strategies, otherwise efforts to maximise guideline reach and uptake may be limited. The development and dissemination of simple infographics may provide an appropriate and effective initial first step.

Irrespective of dissemination method/s appropriate dissemination should be underpinned by consistent messaging and include a collaborative approach. That is,
parents/caregivers should be exposed to the same consistent message from different sources, multiple times throughout their child’s Early Years. Effective dissemination needs to involve parents/caregivers hearing, seeing and discussing the Movement Guidelines regularly, for example, in the day-to-day life of the family, in social/peer networks, at ECEC settings, when interacting with health and other professionals face-to-face and online. Given that parents of young children are one of the largest users of social media, innovative social media messages maybe an appropriate and effective dissemination avenue. Population level effective social marketing can be expensive; however, given the breadth of social marketing options available to date, some innovative social marketing strategies may be effective and not require extensive resources.

It is critical that parents, early childhood educators and health professionals, advocate for the dissemination of the Movement Guidelines. Collaborations between stakeholders are needed for effective dissemination and in turn effective uptake of the Movement Guidelines. It was beyond the scope of this study to further investigate how such collaborations could be established and developed to ensure effective dissemination and implementation, however this is an important area to consider in future research on implementation of the Movement Guidelines among the public. If a coordinated approach is applied, then it is more likely to result in positive modification of young children’s movement behaviours.

**Strengths and limitations**

This study successfully captured the perceptions of a diverse range of stakeholders including Indigenous groups and low socio economic groups. Stakeholders were
recruited from three states across Australia. While attempts were made to include stakeholders from other areas in Australia (e.g., Queensland and Northern Territory) this was not possible in the given timeframe. Additionally, the sample size for this study was lower than Canadian Stakeholder consultations yet included a greater number of Indigenous stakeholders. Despite not having all States and Territories represented and the sample size being smaller, saturation of themes was reached. The number of participants recruited to some of the focus groups was low. This may have impacted the diversity in group ideas and themes. More resources and a longer period for data collection would have been beneficial for maximising optimal participant numbers in each focus group.

CONCLUSION

This was the first study to engage stakeholders in the development of the Australian 24-hour Movement Guidelines for the Early Years. The study successfully examined stakeholders’ perceptions regarding the acceptability, usability and dissemination of these 24-hour Movement Guidelines. A number of key elements were identified, which, if considered would significantly impact the usability of the Movement Guidelines. If the 24-hour Movement Guidelines for the Early Years are appropriately integrated and uptake is maximised, such Movement Guidelines have significant potential to change the physical activity, health and development trajectory of young children.
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