Parents' role constructions for facilitating physical activity-related behaviours in their young children

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Abstract

Background: The research explored parents' role constructions for themselves and other caregivers in promoting physical activity, limiting screen time, and ensuring their young child is not sedentary or restrained for extended periods. **Method:** Using a qualitative social constructionist epistemological position, ten mothers and ten fathers (aged 22 to 49 years) from different households in South East Queensland, Australia, were interviewed. The interviews were transcribed verbatim and analysed using thematic analysis. **Results:** Thirteen themes emerged in parents' descriptions of their role, aligning with three of the four key influences on parents' role constructions for involvement in their child's behaviour: beliefs about desired child outcomes, beliefs about who is responsible for the outcomes, and parental behaviours related to the beliefs and expectations. **Conclusions:** Current findings indicate that parents commonly describe active manifestations of parent role constructions that are conducive to facilitating childhood physical activity-related behaviours. Because many young Australian children are still not sufficiently active, future interventions should seek to target processes influencing parents' ability to fulfil their constructed roles and translate them into actions, including knowledge and skills, self-efficacy for helping their child, and developing the ability to manage the mix of demands on their time.

What is already known about this topic

- Almost one-third of children under 5 years are not engaging in sufficient physical activity and nearly two-thirds are spending more time sedentary than recommended.
- Parents have considerable influence over their children's activity levels and health behaviours that are foundational for later life.
- Parents' social role constructions for involvement in their children's behaviours have been associated with a range of child health behaviours, including physical activity.

What this topic adds

- The study provides a rich account of the social role constructions of mothers and fathers in ensuring their children are sufficiently active.
- All themes that emerged are active manifestations of parental role constructions conducive to facilitating physical activity.
- Future interventions could target factors influencing parents' ability to translate their constructed roles into actions, including provision of knowledge and skills, self-efficacy for doing so, and developing the ability to manage the mix of demands on their time.

Physical inactivity and engagement in sedentary behaviours are an important concern for health professionals across the lifespan (Shen et al., 2014), with physical inactivity the fourth leading cause of death related to non-communicable disease (World Health Organisation, 2009). The early years are foundational to the development of health-enhancing behaviours (Hamilton, Kirkpatrick, Rebar, & Hagger, 2017; Hamilton, Kothe, Mullan, & Spinks, 2017) that often track through life (Biddle, Pearson, Ross, & Braithwaite, 2010; Telama et al., 2014). Given parents' capacity to promote or restrict their child's engagement in physical activity and sedentary behaviours, exploring influences on parental decision-making aimed at increasing physical activity-related behaviours in young children has been a focal point of research (Andrews, Silk, & Eneli, 2010; Hamilton & Schwarzer, 2017; Hamilton, Thomson, & White, 2013). Social role construction has been identified as influential in parents' decision-making in several domains, because it relates to parents' beliefs about their role in relation to their children's development (Hamilton & White, 2010; Hoover-Dempsey & Sandler, 1995; Hoover-Dempsey, Walker, & Sandler, 2005). An understanding of these socially constructed roles is instrumental in developing intervention strategies to support parents in ensuring their child is sufficiently active.

Regular engagement in moderate-to-vigorous intensity physical activity (MVPA) has consistently been associated with reduced risk of mortality across the lifespan (Löllgen, Böckenhoff, & Knapp, 2009; Wanner et al., 2014). A recent review also indicated physical activity is associated with more proximal benefits in the early years, such as motor skill development, bone and skeletal health, better adiposity, cardiometabolic health, cognitive development, and psychosocial health (Timmons et al., 2012). Distinct from engagement in physical activity are *sedentary behaviours* (Shen et al., 2014), which are defined as any behaviour during waking hours that involves sitting or lying down and expenditure of very little energy (Barnes et al., 2012). Because research has found that sedentary behaviours are relatively independent of engagement in MVPA, it is suggested that the two behaviours are explored separately in the context of health promotion (Craft et al., 2012).

"Screen time" as a leisure activity has thus far been the most commonly examined sedentary behaviour in the literature. However, recent research has found that overall sedentary time and screen time are only weakly correlated (Clark et al., 2011), indicating that it is important to also explore the influences on individuals' decision-making related to overall sedentary behaviour. Across the lifespan, high levels of sedentary behaviour are associated with an elevated risk of non-communicable diseases, including several types of cancers (Shen et al., 2014), cardiovascular diseases (Katzmarzyk, Church, Craig, &

Bouchard, 2009), and diabetes (Begg, 2007). Screen time in particular has been found to pose proximal risks to children's health, including greater adiposity and lower ratings of psychosocial health and cognitive development (LeBlanc et al., 2012). LeBlanc and colleagues also identified in their review that in several studies a dose–response relationship was evident between screen time and psychosocial health and cognitive development. Alongside the proximal effect of inactivity on child health, early habits formed relating to engagement in physical activity and in sedentary behaviours have been found to track from the early years into adulthood (Biddle et al., 2010; Telama et al., 2014). Thus, exploring the foundations of these behaviours in pre-school aged children (i.e., ages 2–5 years) is an important step towards addressing these substantial concerns to public health.

The Australian Physical Activity and Sedentary Behaviour Guidelines (Department of Health, 2014) recommend that children aged 2 to 5 years should be physically active for at least three hours each day, and that daily screen time is limited to one hour. However, the most recent Australian Health Survey: Physical Activity 2011–12, recording daily activity and sedentary behaviours over a week, found that 28% of children aged 2 to 4 years were not meeting the recommendations for daily physical activity, and 57% of children averaged more than the daily recommendation of engagement in sedentary behaviours (e.g., screen time activities; Australian Bureau of Statistics, 2013). A recent review found that previous interventions to reduce sedentary behaviours in young children have had a small, albeit significant effect, suggesting a strong habitual component and reinforcing nature of sedentary behaviours (Biddle, Petrolini, & Pearson, 2014). Given that parents possess the capacity to restrict their child's engagement in habitual sedentary behaviours such as screen time, influences on their decision-making during the child's formative years are important to explore (Andrews et al., 2010; Hamilton & Schwarzer, 2017; Hamilton et al., 2013).

Parents' role constructions have been found to be influential in parental decision-making in other domains, such as parents' involvement in their children's education and, more recently, parental promotion of their child's health behaviours (Hamilton, Spinks, White, Kavanagh, & Walsh, 2016; Thomson, White, & Hamilton, 2012). *Parent role constructions* are defined as the beliefs parents hold in relation to what they must do for their children (Hoover-Dempsey & Sandler, 1995; Hoover-Dempsey et al., 2005). Specifically, these roles are socially constructed and comprise sets of expectations or beliefs that guide parents' choices regarding their children's behaviour within specific contexts, and that are influenced by (1) beliefs about desired child outcomes, (2) beliefs about who the person responsible for the outcomes is, (3) perceptions of important others; and, (4) parental

behaviours related to the beliefs and expectations (Hoover-Dempsey et al., 2005). It is also suggested that role constructions have both active and passive manifestations of (1) beliefs that the primary responsibility belongs to the parents (active) vs. others (passive), (2) beliefs that parents should be active in meeting these responsibilities (active) vs. only acting when encouraged by other caregivers (passive), and (3) personal behaviours that include active support for their child's activity (active) vs. behaviours that include reliance on the other caregivers.

Role construction theory has also been applied to parental promotion of health behaviours in their children. For example, it has been found that mothers who view themselves as active facilitators of their child's sun-safety behaviours (i.e., parental behaviours related to role-related beliefs and expectations) are more likely to ensure that their child applies sunscreen when engaging in outdoor activities (Thomson et al., 2012). Further, parents' active role constructions around the belief that it is their responsibility to limit their child's screen time has been found in a prospective study to influence parent screen time (Hamilton et al., 2016). Also, a large US study found parents' beliefs related to their role in promoting their child's healthy eating behaviours, and self-efficacy in doing so, were significantly associated with the child's fruit and vegetable intake, engagement in physical activity, and body mass index (Ice, Neal, & Cottrell, 2014). These studies support the idea that role constructions are important to consider in the context of understanding parents' decision-making with regards to promoting their children's health. Because these role constructions appear to be associated with children's behaviour and health outcomes, it is expected that exploration of the beliefs underpinning them and how these beliefs manifest will provide valuable understanding that will inform future interventions. Further, as approximately 54.7% of children aged 3 to 5 years (Australian Bureau of Statistics, 2010) are routinely cared for by people other than their parents (e.g., child care, family, friends), it is important to also explore parents' role constructions surrounding other caregivers for promotion of the health behaviours.

Given the impact of sedentary lifestyles on young children, and the support for the influence of social role constructions on parental decision-making, there is a clear benefit to conducting exploratory research to ascertain the social roles mothers and fathers hold in relation to ensuring their children are active. Therefore, the aim of the current study was to explore parents' role constructions for themselves and other caregivers in (1) promoting physical activity, (2) limiting screen time, and (3) ensuring that their child is not sedentary or restrained for extended periods.

Method

Participants

A purposive sampling method using convenience techniques (Patton, 2002) was adopted to recruit ten mothers and ten fathers, all from different families ($n = 20$). The use of purposive sampling allowed for an equal balance of mothers and fathers across a range of demographic characteristics to be recruited. Eligibility criteria for the study included being aged 18 years and over and having at least one child aged between 2 and 5 years who usually resided in the same household as the parent. Participants were recruited from urban areas in the Greater Brisbane region, Queensland, Australia, using posters displayed online and throughout the community, and snowballing techniques. To reduce the chance of selection bias, recruitment did not occur in places known to be frequented by active parents, such as parks and sporting facilities.

All participants were Caucasian and ranged in age from 22 to 49 years ($M = 35.05$, $SD = 6.71$). The majority of parents were aged 30–40 years (60%), with 20% of parents aged less than 30 years, and 20% of parents aged older than 40 years. Participants indicated their current level of physical activity by selecting one of four options: “I regularly/sometimes/rarely/never engage in physical activity”, with 60% indicating that they regularly engaged in physical activity, and 40% indicating that they sometimes engaged in physical activity. Similar single-item measures have been found to be valid in assessing physical activity against longer self-report and objective measures of physical activity (Hamilton, White, & Cuddihy, 2012). From the interview data, we determined that 35% of parents reported their child was involved in an organised sport/s (e.g., swimming lessons, gymnastics, little athletics, football and/or dancing). Twelve participants had attained either an undergraduate or postgraduate degree, three had attained a trade/diploma certificate, four had completed either grade 10 or 12 of high school, and one participant had not completed grade 10. All 10 males were in full-time employment. Regarding the female participants, two were in full-time employment, three were in part-time employment, two were both studying and in casual employment, and three were engaged in home duties only. Most participants (85%) were in a partnered relationship. Five parents had one child, nine had two children, four had three children, and two of the parents had four or more children. Seventeen participants (85%) indicated their child attended some form of regular childcare.

Design and Procedure

The current study adopted a qualitative research design underpinned by a social constructionist epistemological position (Gergen, 1999). Interview questions were inspired by

theory grounded in social role construction (Hoover-Dempsey & Sandler, 1995; Hoover-Dempsey et al., 2005). Questions were designed to stimulate discussion surrounding the role parents believe they held, as well as their beliefs about the role of other caregivers in promoting their child's physical activity, limiting screen time, and ensuring their child is not sedentary. The Australian Guidelines for Physical Activity and Sedentary Behaviour for children aged 2–5 years (Department of Health, 2014) was the reference point for guidelines and definitions of terms used in this research. The interviewer read this information aloud to the participants prior to their answering questions about each of the three health behaviours (i.e., physical activity, screen time, and children being sedentary or restrained). *Physical activity* was defined as “Children should be physically active every day for at least three hours, spread throughout the day. Physical activity for children can be accumulated throughout the day and can include light activity (such as standing up, moving around, and playing) as well as more vigorous activity (such as running and jumping)”. *Screen time* was defined as “sitting and watching television and the use of other electronic devices (e.g., DVDs, computer, and electronic games), and should be limited to less than one hour per day”. Ensuring a child was not sedentary or restrained for extended periods was referenced by “Children should not be sedentary, restrained, or kept inactive for more than one hour at a time, with the exception of sleeping”.

Individual interviews were conducted by one trained research assistant in a range of settings (e.g., home, library, workplace) and at varying times of day to reduce inconvenience for participants. All participants were unknown to the researcher. Recorded interviews were approximately one hour in length and were transcribed verbatim. The interview process was pilot tested with a series of practice interviews among the research team. Secondary piloting was conducted using the first two interview participants; however, as no modifications to the interview guide were required, these participants were included in the final analyses. The interview process was guided by several criteria of good practice in qualitative research (Tracy, 2010), including worthiness of topic, sincerity (through the use of a reflexive journal and practicing self-reflection), rich rigor, and relational ethics. The interviewer also used confirming summaries to ensure the validation of collected information, and to invite participants to clarify or elaborate on the summary obtained (Braun & Clarke, 2013). The study was approved by the university Human Research Ethics Committee (approval number #1100000757).

Interview Guide

Preceding the questions surrounding parents' role constructions for each health

behaviour, the following pre-text was read aloud by the interviewer: “I would like you to think about how you define your parenting role and the expectations you have of yourself as a parent and of others who may care for your child/children on a regular basis”. The first question was, “First, when you think about the role of a parent, what does it mean to be a parent who ensures that their child is physically active for at least 3 hours every day?”. The second question was, “What responsibility do you believe you have to your child to ensure that they are physically active for at least three hours every day?”. The third question was, “Sometimes other people are responsible for the caregiving of our children on a regular basis (e.g., other carers, childcare professionals, teachers): what do you consider are the roles of these caregivers in ensuring that your child is physically active for at least three hours every day?”. Questions were identically worded for the other two health behaviours, except that “ensuring that your child is active for at least three hours every day” was replaced with “ensuring that screen time is limited to less than one hour every day” and “ensuring that your child is not sedentary/inactive/restrained for more than one hour at a time”.

Interview Analysis

The aim of the research was to allow themes to form based on parents’ descriptions, and hence thematic analysis was used to interpret the data. To ensure a rigorous and methodologically sound approach to understanding parents’ descriptions, the six stages of thematic analysis as outlined by Braun and Clarke (2006) were employed. The transcribed data were initially separated to analyse parents’ descriptions of their own role and responsibilities separate from their descriptions of the role of other caregivers. In Step 1, transcripts were read and re-read by the first author to ensure familiarity with the data. Second, interesting features of the data were identified and coded in a systematic fashion for all relevant interview questions, again by the first author. To ensure rigour and confidence in the findings, a code-recode procedure was used for 20% of the data, and 10% of the data were co-coded by the last author, with 100% agreement between coders. Third, codes were inductively separated into initial themes by the first author. Fourth, using an iterative process (Miles & Huberman, 1994; Strauss, 1987), themes were reviewed with reference to the interview transcripts from which each of the codes were drawn—both to ensure the themes were reflective of their original context and to ensure theoretical saturation had been attained. Fifth, themes were reviewed, refined, and named by the first and last authors. Finally, each theme was reported, and interesting extracts were included to demonstrate contextual significance.

Results and Discussion

Parents' descriptions were organised according to three of the four key beliefs underpinning parents' role constructions for involvement in their child's behaviour: beliefs about desired child outcomes, beliefs about who the person responsible for the outcomes is, and parental behaviours related to the beliefs and expectations (Hoover-Dempsey et al., 2005). No themes emerged regarding perceptions of important others, which is the other key belief theorised to underpin parents' role constructions. Themes for each category were relatively consistent across parents' descriptions regarding physical activity, screen time, and ensuring their child is not inactive or restrained for extended periods and, hence, reported together. Seven themes emerged from parents' descriptions of their own roles in promoting the three physical activity-related behaviours and six themes regarding parents' expectations of other caregivers. Because parents were asked about their own and other caregivers' roles separately, themes that emerged in discussions about other caregivers are marked with an asterisk (*). Quotes in the following section are classified based on status as a mother (M) or father (F) and on participant number (e.g., *M01*). Themes were also explored in the context of five demographic factors (parent gender, age, employment status, education level, and child in organised sport) to examine whether these themes occurred in greater proportions among parents with certain characteristics. Differences in proportion greater than 40% in one demographic category were considered noteworthy and are discussed within the description of the relevant themes. See Table 1 for a summary of theme frequencies and proportions among each of the demographic factors.

Beliefs About Desired Child Outcomes

Ensuring child's health and happiness. Parents described their role as encompassing the responsibility to ensure their child's health and happiness. Within this theme, parents recognised the need to make their child's health a priority, and also to find a balance between interacting with their child and the parent enjoying their own life. For example, "You need to ensure that they're getting that physical exercise. Because it not only makes them physically healthy but emotionally healthy and mentally healthy" - *M11*. This finding aligned with the "*ethic of care*" concept, which is defined as the recognition that less vulnerable groups should afford extra consideration to vulnerable groups, due to their ability to be affected by their choices (Gilligan, 1982). The child is the vulnerable one in the present context because they are easily affected by their parents' choices. Parents viewed their role as entailing promotion of the three health behaviours because they were perceived to be good for their child. Conversely, they expected that not making the choice to actively do this would

adversely affect their child.

Setting up healthy habits for later life. Parents also perceived that their role encompassed a responsibility to their child of setting up healthy habits for later life. For example, “I see it as just teaching her good habits to set her up for a healthy life so that when she’s out of our hands, that she continues being a healthy person” - *M04*. Because habit has been found to be a reliable predictor of behavioural engagement (Gardner, de Bruijn, & Lally, 2011; Hamilton, Orbell, Bonham, Kroon, & Schwarzer, 2017), the implication of this emergent role construction is that it provides a further focal point for supporting parents. Furthermore, parents’ descriptions did not include a detailed understanding of the processes underpinning habit formation. An understanding of how behaviours become more automatic (or habitual) in response to specific cues, through repetition in the presence of these cues (Lally, Van Jaarsveld, Potts, & Wardle, 2010), may assist parents in more effectively fulfilling their perceived role in supporting their child to form habits for living an active and healthy life. It is also noteworthy that this theme occurred in a greater proportion of mothers (60%) than fathers (20%). Setting up the child with healthy habits for later life is a desired outcome that also closely aligns with the “ethic of care” concept (Gilligan, 1982). Because prior research has found mothers to place “ethic of care” and caring for their child above their own physical activity (Hamilton & White, 2010; Miller & Brown, 2005), it is possible that this theme emerging more strongly for mothers reflects an important gender difference in the most salient desired child outcomes.

Beliefs About Who the Person Responsible for the Outcomes Is

Being a good parent. The belief that facilitation of the health behaviours is part of one’s role and responsibility as a good parent emerged. Parents described that they are responsible for taking a proactive approach to facilitating this behaviour through time spent interacting with their child, and being mindful of the impact of extended restraint when making plans. For example, “It means you’re trying to do your job well” - *F12*. This role of the “good parent” draws parallels with prior research, where the role is described as being constructed through the public act of parenting being observed by other parents (Trussell & Shaw, 2012). This belief presents as pragmatic and useful; however, as previous research has found, parental knowledge is only weakly predictive of child health behaviours (Vereecken & Maes, 2010). Since many children are not sufficiently active, it may be useful for future interventions to consider imparting strategies for parents to translate their knowledge into actions such as implementation intentions (Gollwitzer, 1999).

Ad hoc vs. regular care*. Regarding parents’ expectations of other caregivers,

differing expectations based on frequency of care emerged. More ad hoc caregivers such as family or friends, for example, were granted more lenience by parents because it was perceived that inactivity had less of an impact in these situations, so long as parents were adequately adhering to guidelines. For example, “Family—they don’t regularly look after my kids so if it was an occasional thing, I can live with that” - *F18*. The implications of the lenience granted to ad hoc and unpaid caregivers are that parents have described clearly defined situations where inactivity is excusable in their child’s life. Because the frequency of care by alternate caregivers varies considerably between individuals, it is unclear where the line is drawn regarding who is not expected to facilitate activity and the extent to which this type of care accumulates. It may be more useful, therefore, for parents to construct the role of all people providing care to their child as being members of a team who value the facilitation of physical activity and limiting of screen time, with the goal of doing as much as practical in any given situation.

Not “plonking” the child in front of the television*. In contrast to the previous belief regarding frequency of care, some parents stated that, in most cases, it would be unacceptable for any caregiver to place their child in front of a television. Parents expressed that in taking on the responsibility to provide care at any point, the caregiver needs to commit to “putting in the effort” to care for the child, and not “plonking” the child in front of a television. For example, “We wouldn’t love them to ‘plonk’ [put] the kids in front of the TV. We think that it takes a little bit more effort than that.” - *F09*. This theme emerged in a considerably greater proportion of mothers (60%) compared to fathers (10%). On average, mothers spend more time caregiving than fathers (Baxter, 2015), and caregiving by fathers also more commonly involves active play and other interactive activities (Craig, 2006; Craig & Mullan, 2011). Thus, it is possible that the need for alternate caregivers to restrict screen time is less salient for fathers, whose time with their child is predominantly active.

Same role as themselves*. Many parents indicated that they believed other caregivers had the same role as themselves in facilitating all three health behaviours. One father explained, “Hmm ... well as much like a parent’s role as possible, I suppose” - *P15*. While holding the same role as a parent was described, particularly in relation to screen time, other parents indicated that they were slightly more flexible due to the difficulty in entertaining the child, so long as an effort was still made by the caregiver. Another father explained,

But I’d probably be a little bit more flexible because of how hard it is to keep them entertained ... we do specifically, do try to limit it to one hour a day. I don’t have that

expectation on others ... my expectation would be, you still have to make an effort.

P09.

While this theme presents as both an active and passive manifestation of a role construction (Hoover-Dempsey et al., 2005), the lenience granted to alternate caregivers suggests that the overarching manifestation of the belief is active. That is, rather than holding truly shared responsibility, parents assume complete responsibility for their child but expect other caregivers to also contribute by making some effort to facilitate the health behaviours.

Unwilling to impose this task on other caregivers*. While several parents firmly described that alternate caregivers have the same role as themselves in facilitating the three health behaviours, a contrasting viewpoint emerged: some parents were unwilling to impose this task on other caregivers. Parents who expressed this viewpoint indicated that it was more important for the health behaviours to be facilitated at home, and that a balance could be created in that way rather than imposing the task on other people. For example:

I know that if she's watching TV it's because they're too busy or because their lifestyle is different to mine and they might not limit her screen time as much, but I know that it's so limited at home that it sort of balances out. *M11.*

This theme emerged in a considerably greater proportion of parents who are not engaged in full-time employment (75%) compared to those who are in full-time employment (16.7%). Prior research has found that insufficient time is a barrier to promoting child physical activity and that this barrier is especially salient for working parents (Irwin, He, Bouck, Tucker, & Pollett, 2005). Therefore, it is possible that time constraints faced by working parents make delegating a portion of the task of keeping their child active more common, resulting in beliefs around not imposing the task onto others being less salient.

Parental Behaviours Related to the Beliefs and Expectations

Provision of social support. A multifaceted theme emerged from descriptions by a majority of the parents in that they perceived their role to involve provision of a number of supportive behaviours that inductively aligned with the conceptualisations of social support (Cohen & Wills, 1985). Providing encouragement to be active, encouragement to try new things in order to maintain interest in being active, and to give the child enthusiasm and motivation to be active, were all forms of emotional support. As one father said, "So I think it's just a case of, yeah, just encouraging them to not be afraid of different things in roles of activity and that sort of thing" - *F05.*

Provision of opportunities for one's child also emerged, which is a form of tangible support. One mother commented,

I'd be responsible and, yeah, discipline myself but also finding time and money to be able to send her to gym classes or her swimming lessons or whatever else that we want to do as she gets older ...and we've talked about it a lot, you know, about having to sacrifice our own social time on weekends for her to go to her sports and whatever else. - *M04*.

Guidance and the passing on of skills were further behaviours described by parents as a part of their role, and are a type of informational/instructional support. One mother explained, "But I think if you have that desire within yourself, to make it happen and you pass those skills onto your children. Whether it's activity or eating behaviours or manners, plain and simply it's your responsibility to guide them appropriately" - *M07*. Some fathers, on the other hand, described their responsibility to facilitate their child learning from other children through activity, interacting and building bonds, which is a form of companionship support. One father explained,

It means a lot to us to make sure the kids are playing either individually and can, in doing that, in having good play—or they play together. And they are building bonds like that, they're learning doing that. That's just such an interaction ... -*F19*.

While it is evident from these descriptions that parents embrace the role of providing social support, the type or combination of types of social support indicated to be important varied between parents. For example, some parents placed emphasis on provision of tangible support through providing opportunities for physical activity, while other parents described provision of informational support through providing guidance as important. It is unclear, however, which types of social support are most effective for facilitating physical activity-related behaviours in young children, and if this remains constant in the later stages of development. Because there are competing demands on parents' time (Hamilton et al., 2014; Thompson et al., 2010), understanding the types of social support most effective in facilitating active lifestyles in young children would be useful in supporting parents in this role, and should be explored in future research.

Parental modelling. The parents also perceived their role as entailing parental modelling of the three health behaviours and being active with their child as part of their own active lifestyle. For example, "I think it's your role where sometimes it's a case of monkey see, monkey do. So you have to be active yourself" - *F05*. Because several studies have found significant associations between parental modelling and child nutrition, physical activity, and screen time behaviours (Jago et al., 2013; Natale et al., 2014), it is likely that parents who are active and model healthy lifestyles choices will have children who make

similar choices. Prior research has identified that parents engaging in physical activity in the presence of their children experience the barrier that they find it difficult to reach the workout intensity required for personal benefit, due to factors such as attending to the child (Hamilton & White, 2010). It may be useful, therefore, for future research to target methods of supporting parents to develop strategies for living an active lifestyle in the company of their children, and modelling these physical activity-related behaviours.

Being an informed parent. Parents also described that they are responsible for being an informed parent with regards to both awareness of the guidelines for physical activity and sedentary behaviour, and also for the extent to which their child is actually involved in these behaviours. For example:

I think it's a matter of being cognisant of physical activity and ensuring that if you feel that they have been sedentary for more than you think is appropriate, that you might have to intervene and say, "Hey, let's all go outside and run around", or, "Let's go and play soccer", or, "Let's go to the park, or..." - *F20*.

Health information-seeking is a common practice among parents, and receives considerable research attention (Khoo, Bolt, Babl, Jury, & Goldman, 2008). This theme is an example of an active manifestation of role construction (Hoover-Dempsey et al., 2005), whereby parents are taking responsibility for sourcing information about guidelines, and also for the extent to which their child is meeting them. We anticipate that this behaviour of seeking health information is a source of self-efficacy for parents in ensuring their child is sufficiently active, which, according to Hoover-Dempsey and colleagues (2005), influences parents' decisions for involvement in their child's behaviour.

Not using television as a babysitter. Another theme emerged whereby parents described that an important role of a primary caregiver was to keep their child entertained and not use television as a babysitter. Television, however, was described as a tempting option due to competing demands on parents' time, such as busy lifestyles and diverse interests of individual children (Hamilton, Hatzis, Kavanagh, & White, 2014; Thompson et al., 2010). Parents reported that at times their capacity to interact with their children and keep them active may be reduced. For example:

As tempting as it might be, I'm sure I'll do it [allow the child to watch television], I'm certain I'll do it at some point, but I think disciplining myself to make sure that that isn't something that we're doing, that we're not using the TV as a tool and as a baby sitter - *M04*.

Choosing child-care services that facilitate requirements*. In a similar vein to

discussions surrounding “ethic of care”, parents described that they were responsible for choosing childcare services that facilitate requirements that promote health behaviours. For example, “We did a lot of research with the kindergarten place where we send our children and we were really happy with just their programs on the physical side of it.” - *F05*. Most commonly, parents reported that physical activity promotion and limiting screen time was expected of childcare providers because they are a paid service. This is a particularly strong example of an active manifestation of parents’ role construction for involvement (Hoover-Dempsey et al., 2005), in that while these parents expect child care services to facilitate the activity requirements, they are also taking responsibility for finding child care services that have these measures in place.

Communicating expectations/mutual awareness*. Parents also described a shared responsibility for facilitating the three health behaviours with alternate caregivers, achieved through communicating expectations and attaining mutual awareness. Parents recognised that they are responsible for communicating expectations, and that when these expectations have been communicated, parents trust they will be adhered to. For example, “I think their role is probably being aware of the approaches that we take as parents, so we do try and communicate that” - *M04*. Further, parents described their responsibility of being aware of what occurs when the child is outside of their care, and of compensating for inactivity when the child is in their care (i.e., reducing usual screen time at home to compensate for another caregiver allowing screen time). Together, these examples indicate a tendency of parents toward an active manifestation of this role, in that parents communicate expectations to others, and then monitor adherence. If this behaviour is to be effective in increasing the child’s activity levels, it is important that communication of parents’ activity-related expectations is clear, and that accurate information regarding activity levels is fed back to parents. It is important to note that this theme of communicating expectations and mutual awareness presented in a considerably greater proportion of mothers (60%) compared with fathers (20%), and in those who are university educated (58.3%) compared with those who are not (12.5%). This difference may reflect that the majority of childcare occurs on weekdays, which is when mothers on average spend more time engaged in caregiving than fathers (Baxter, 2015). Thus, if mothers more frequently engage in handover of their child with alternate caregivers, this belief may be more salient for mothers. Further, parents who are more highly educated may consider knowledge, awareness, and communication to be more important, placing an emphasis on the importance of this behaviour of communicating expectations and being aware of activity levels.

Practical Applications

Aside from the theme outlining that some parents are unwilling to impose the task on other caregivers, it is evident that all themes demonstrate parents' constructions of their role encompassing promotion of physical activity, limiting screen time, and ensuring their child is not sedentary for extended periods. Further, all of the themes that emerged are examples of active manifestations of role constructions (Hoover-Dempsey et al., 2005), whereby parents are taking responsibility for their own role in facilitating physical activity-related behaviours in their child. Given the active manifestations of parents' role constructions that are optimal for parental involvement in their child's behaviour, future interventions should draw upon Hoover-Dempsey and colleagues' (2005) model of parental involvement to target processes that influence parents fulfilling their constructed roles and translating them into actions including parents' knowledge/skills, parents' self-efficacy for helping their child, and parents' ability to manage the mix of demands on their time.

While most of the role constructions intuitively present as useful, in some instances their actual utility differs. For example, prior research found being an informed parent only weakly predicts children's health behaviours (Vereecken & Maes, 2010). Other themes, such as parental modelling (through facilitating formation of habits around physical activity) do predict children's health behaviours (Gardner et al., 2011). A range of barriers, including lack of knowledge of activity guidelines, difficulties in dissemination of information from external caregivers to parents, and holding generally busy lifestyles, may be reducing parents' capacity to fulfil this role. Further, parents described that they hold a responsibility to be aware of activity guidelines, and that this entails seeking out information and implementing acquired knowledge. Because the process contains several steps, agencies that attempt to engage parents in adhering to these guidelines could take further steps to simplify the process by ensuring that this information is salient and better disseminated to parents. This process improvement is particularly important, because parents who are pressured for time may not actually seek out this information. Thus, this would help to increase parents' knowledge and would assist parents in fulfilling the role of being an informed parent more efficiently. Additionally, communication books are commonly used to create dialogue between parents and staff at child care centres. This strategy could be expanded to include physical activity and screen time, which would create a mutual awareness of what is actually occurring for the child and would also make the facilitation of these health behaviours more salient for both parents and child care staff. This strategy would serve to build self-efficacy for parents' involvement in communicating activity levels by making the process an effective and regular

part of the childcare environment.

While the responsibility to model physical activity, and be active with one's child, emerged as an important parental role, it was indicated that due to busy lifestyles and competing demands on parents' time, doing so is not always practical. Because parental modelling has been found to predict children's health behaviours (Jago et al., 2013; Natale et al., 2014), it is likely that interventions effective in promoting active lifestyles in parents (such as those identified by Hamilton & White, 2014) would have a subsequent effect of increasing physical activity-related behaviours in their children. Promoting integrative activities (Hamilton & White, 2014), where parents can be active alongside their child, may be a particularly useful approach for promoting child physical activity-related behaviours in a time-efficient manner.

Strengths, Limitations and Future Directions

To the authors' knowledge, the current study is the first to explore parents' constructions of their role in promoting physical activity, limiting screen time, and ensuring their child is not sedentary for extended periods. Prior research by Dwyer, Higgs, Hardy, and Baur (2008) qualitatively examined factors influencing young children's physical activity and screen time and identified a range of barriers and facilitators from a parent and preschool staff's dyadic perspective. In contrast, the current study's results provide a unique perspective through examining extended periods of restraint/sedentary time in addition to the other health behaviours. Furthermore, findings in this study provide a rich understanding of the active manifestations of parents' role constructions for facilitating the three physical activity-related behaviours. In addition, this study explores each of these behaviours separately, which is useful given prior research has found screen time and overall time spent sedentary are only weakly correlated (Clark et al., 2011) yet are frequently examined together. Despite this, current findings indicate that parents' role constructions underpinning their decision-making for all three of the physical activity-related behaviours are similar. Finally, using a purposive sampling method (Patton, 2002), the current study sampled parents from a range of education levels and employment statuses.

The findings of the study should also be considered in light of some limitations. There was a singular focus on parents' role constructions and responsibilities toward their child in facilitating the three health behaviours, which did not explore whether these parents actually engaged in the facilitation that was described. To attain a more comprehensive understanding, future research should explore the barriers and challenges parents face when attempting to fulfil their perceived role in terms of both instilling and maintaining the three physical

activity-related health behaviours. Furthermore, participants were self-selected, with the majority being university educated, and all participants were Caucasian. Because these factors may influence the representativeness of the sample to all families of Australian pre-schoolers, future research should seek to further validate these themes in a larger and more ethnically and educationally diverse sample. While the descriptions of these parents have provided valuable insight into the socially constructed roles in promoting the three health behaviours within a Caucasian population, it would be beneficial for future research to include parents from different cultural groups, because parental practices are argued to be influenced by knowledge received from culture (Hoover-Dempsey & Sandler, 1997). Furthermore, although an equal proportion of mothers and fathers were interviewed, we only attained descriptions based on the experience of one parent from each household. Future research should explore the experiences of both parents within a household in order to understand the interaction and dynamic processes between the parents with regards to facilitation of health behaviours in their children.

Conclusions

The current study has provided a rich understanding of parents' role constructions in relation to promoting physical activity, limiting screen time, and ensuring their child is not sedentary for extended periods, *both for themselves and for other caregivers. While many of the role constructions that emerged are active role manifestations conducive to facilitation of the three physical-activity-related behaviours, a substantial proportion of young Australian children are still not sufficiently active. The understanding of parents' role constructions afforded by the current research, however, indicates that parents largely understand the importance of ensuring their child is active and that parents possess a range of constructions about their role in facilitating this objective. Because the themes that emerged are active manifestations of role constructions, it is recommended that future interventions target processes influencing parents' ability to fulfil their constructed roles and translate them into actions, including building knowledge and skills, building self-efficacy for helping their child, and developing the ability to manage the mix of demands on their time.

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Table 1

Summary of key themes across the full sample of parents (N=20) and across gender, employment status, education level, and child in organised sport

Theme	Total (N=20)	Mother (n=10)	Father (n=10)	Full-time work (n=12)	Not in full-time work (n=8)	University educated (n=12)	Not university educated (n=8)	Child in organised sport (n=7)	Child not in organised sport (n=13)
Beliefs About Desired Child Outcomes	<i>N^a</i>	<i>n^a</i>	<i>n^a</i>	<i>n^a</i>	<i>n^a</i>	<i>n^a</i>	<i>n^a</i>	<i>n^a</i>	<i>n^a</i>
Ensuring child's health and happiness	11(55%)	6 (60%)	5 (50%)	6 (50%)	5 (62.5%)	7 (58.3%)	4 (50%)	5 (71.4%)	6 (46.2%)
Setting up healthy habits for later life	8 (40%)	6 (60%)	2 (20%)	3 (25%)	5 (62.5%)	5 (41.7%)	3 (37.5%)	3 (42.7%)	5 (38.5%)
Beliefs About Who the Person Responsible for the Outcomes Is									
Being a good parent	17(85%)	9 (90%)	8 (80%)	9 (75%)	8 (100%)	10 (83.3%)	7 (87.5%)	5 (71.4%)	12 (92.3%)
Ad hoc vs. regular care*	8 (40%)	3 (30%)	5 (50%)	6 (50%)	2 (25%)	5 (41.7%)	3 (37.5%)	2 (28.6%)	6 (46.2%)
Not "plonking" the child in front of television*	7 (35%)	6 (60%)	1 (10%)	5 (41.7%)	2 (25%)	5 (41.7%)	7 (87.5%)	1 (14.3%)	6 (46.2%)
Same role as themselves*	9 (45%)	5 (50%)	4 (40%)	5 (41.7%)	4 (50%)	7 (58.3%)	2 (25%)	5 (71.4%)	4 (30.8%)
Unwilling to impose this task on other caregivers*	6 (30%)	4 (40%)	2 (20%)	2 (16.7%)	6 (75%)	3 (25%)	3 (37.5%)	3 (42.9%)	3 (23.1%)
Parental Behaviours Related to the Beliefs and Expectations									
Provision of social support	8 (40%)	5 (50%)	3 (30%)	5 (41.7%)	3 (37.5%)	5 (41.7%)	3 (37.5%)	4 (57.1%)	4 (30.8%)
Parental modelling	8 (40%)	4 (40%)	4 (40%)	5 (41.7%)	3 (37.5%)	5 (41.7%)	3 (37.5%)	4 (57.1%)	4 (30.8%)
Being an informed parent	5 (25%)	3 (30%)	2 (20%)	3 (25%)	2 (25%)	4 (33.3%)	1 (12.5%)	2 (28.6%)	3 (23.1%)
Not using television as a babysitter	3 (15%)	2 (20%)	1 (10%)	1 (8.3%)	2 (25%)	3 (25%)	0 (0%)	1 (14.3%)	2 (15.4%)
Choosing child care services that facilitate requirements*	14(70%)	6 (60%)	8 (80%)	9 (75%)	5 (62.5%)	8 (66.7%)	6 (75%)	6 (85.7%)	8 (61.5%)
Communicating expectations/mutual awareness*	8 (40%)	6 (60%)	2 (20%)	4 (33.3%)	4 (50%)	7 (58.3%)	1 (12.5%)	3 (42.9%)	5 (38.5%)

Note: ^aFrequencies used to quantify themes reflect the presence of the belief for a participant (not the number of times that a single participant expressed the same belief).

*Themes that emerged during interview questions regarding other caregivers.