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Physical activity programs in long day care and family day care settings (free full-text available)

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In the past 10 years the prevalence of childhood obesity has increased considerably and there is growing recognition of the need to establish positive attitudes to healthy lifestyle practices from an early age if this trend is to be reversed. Childcare centres provide ideal environments from which to develop these positive attitudes. A literature review conducted to identify best-practice physical activity programs and resources utilised by long day care (LDC) and family day care (FDC) found only one physical activity program directly targeting these settings. In addition, few references to physical activity were found in the National Childcare Accreditation Council Quality Improvement and Accreditation System and Family Day Care Quality Assurance systems. The literature also suggested limited research on the physical activity status of children attending LDC and FDC. Further developments to these areas will improve the delivery of Australian child care and assist in a healthy future for Australian children through LDC and FDC.

Introduction

During the early years of life when rapid growth and development is occurring in all domains, it is possible to establish healthy lifestyle choices and lay the foundations for a child's physical activity patterns. It is important that during this time children are provided with experiences through which to develop positive attitudes towards healthy eating and physical activity (Birch, 1999; Temple & O'Connor, 2003b). Over the past 20–40 years the way these experiences are obtained has altered significantly because of changes in family dynamics, competing time demands and increases to the social, economic and physical aspects of life (Catford & Caterson, 2003).

Many of these changes in society have resulted in an increased demand for formalised child care in Australia. From 1999 to 2004 the number of children attending government-funded child care increased from 577,500 to 752,800, with the number of children attending long day care (LDC) increasing by 18 per cent and family day care (FDC) 13 per cent (Department of Family and Community Services, 2000; Department of Family and Community Services, 2005). LDC and FDC are the forms of early childcare services more commonly utilised by parents in Australia. LDC provides centre-based care for children aged 0–5 years in an institutionalised-type setting during weekdays (Bravo & Cass, 2003; Montague, 2003). In comparison, FDC provides care for children aged birth to five in a home environment during weekdays, weekends and overnight (Bravo & Cass, 2003; Montague, 2003). Due to this increasing reliance on child care and the changing role of childcare centres from child minding to early education and advisory centres, early childcare settings, through their positive environments and structured play and learning, are seen as the ideal settings for promoting healthy lifestyle choices (Pagnini, Wilkenfeld, King, Booth & Booth, 2006).

These changes have placed added responsibility on childcare settings and professionals to provide this service. To do this effectively, childcare professionals have stressed the importance of readily available resources which will enable them to create a healthy environment and educate children in their care, as well as advise the parents and community of the importance of healthy interventions for young children (Temple & O'Connor, 2003a; Hesketh, Waters, Green, Salmon & Williams, 2005; Pagnini et al., 2006).

In this context a review of the physical activity literature was undertaken to identify best-practice physical activity programs utilised by Australian LDC and FDC settings and the key issues that influence the development of these best-practice programs. This paper presents the main findings from the literature.

Methods

The literature review involved a search of Australian Government, State and Territory Government, universities, FDC and LDC accreditation and childcare advisory services websites and databases, including ERIC and the Australian Education Index (AEI), PubMed, EBSCO and Google Scholar for the period 1980–2006. In addition, searches were conducted on Australian physical activity/exercise and nutrition agencies—including the Dietitians Association of Australia, Nutrition Australia, the Australian Council for Health, Physical Education and Recreation (ACHPER) and the Heart Foundation. The search was limited to Australian literature only and conducted over a three-month period from June to September 2006. The key search terms included physical activity/programs, long day care, family day care, child care, exercise, health, wellbeing and a combination of these terms.

Best-practice was defined as a technique, method, process, activity or incentive that is more effective at delivering a particular outcome than any other technique, method or process (Baum, 1992; Speller, 1998). To be classed as best-practice, the program had undergone either an evaluation or quality assurance process and was referred to and recommended in other literature.

Results

The search identified more than 50 documents and websites relating to physical activity programs, resources and the physical activity status of children aged birth to five. In the early literature, there were very few programs and policies relating to physical activity, a trend that has reversed over the past five–10 years. In contrast, policies and strategies relating to healthy eating and nutritional status were developed from 1990, with the earliest identified nutrition program developed for LDC centres in the mid-1990s (Sangster, Chopra & Eccleston, 1996).

The search elicited only one physical activity program that directly targeted children who attended either a LDC or FDC setting, in contrast to 16 nutrition programs identified in the same study as having been developed for these same settings. The 'Moving with Young Children' program, developed in 2003 by the Queensland Government as part of their 'Get Active Queensland Children and Young People' initiative, provides ideas for childcare and kindergarten professionals on how to include physical activity in the everyday program and increase the awareness of physical activity for children in the birth to five-year-old age group, and suggests suitable physical activity equipment for use in these settings (Queensland Government, 2004).

Two further programs, 'Kids—Go for your Life' and 'Romp and Chomp', both developed in Victoria, while not directly targeting children in LDC or FDC settings, provide advice to teachers, parents and the community on improving physical activity and nutrition status of children. 'Kids—Go for your Life', a state-wide initiative developed by the Victorian Government, focuses on nutrition and physical activity for children aged birth to 12 years and their families (Victorian Government, 2006). It can be accessed online and members of the program receive resources to help the relevant community to undertake healthy lifestyle habits by working through a number of health and wellbeing criteria, for example, promoting water consumption and increasing active play (Victorian Government, 2006).

'Romp and Chomp', launched in the Geelong area in 2005, is part of the Deakin University Sentinel Site for Obesity Prevention in the Barwon-South West region project. One of three initiatives of this project, 'Romp and Chomp' aims to reduce and prevent early childhood overweight and obesity through the promotion of healthy eating and physical activity,

including daily fruit and vegetables, less screen time, and daily active play (Deakin University, 2005).

While there were limited programs available for LDC and FDC settings, there are numerous resources, including books, videos and websites, available for use by childcare professionals. A list of resources, although not exhaustive, can be found in the literature review (Lawlis, Mikhailovich & Morrison, 2006). Although not the aim of the review, the literature search also highlighted the limited research undertaken on the physical activity status and requirements of children attending LDC and FDC settings.

Discussion

The Federal Government has identified the status of Australian children's health and wellbeing as a priority area because of the increasing prevalence of childhood obesity. To address this issue nationally, the Government has developed a number of policies and frameworks, including 'Acting on Australia's weight: A strategic plan for the prevention of overweight and obesity', 'Healthy Weight 2008—Australia's Future: The national action agenda for young people and their families', and, more specific to this paper, 'Building a Healthy, Active Australia' and 'Be Active Australia: A framework for health sector action on physical activity'. These provide a rich and sophisticated policy context to address the problem; however, to date, there are no Australian physical activity recommendations for birth to five-year-olds. Guidelines currently utilised by parents and professionals caring for children in the birth to five-age group are based on those published by the National Association for Sport and Physical Education (NASPE) (see Table 1), an association of the American Alliance for Health, Physical Education, Recreation and Dance (National Association for Sport and Physical Education, 2006).

Table 1: Physical activity guidelines for birth to five year olds (National Association for Sport and Physical Education, 2006)*

Birth–12 months

- Infants' physical activity should promote the development of movement skills
- Infants should be placed in safe settings that facilitate physical activity and do not restrict movement for prolonged periods

Toddlers

12–36 months

- Toddlers should accumulate at least 30 minutes daily of structured physical activity
- Toddlers should engage in at least 60 minutes and up to several hours per day of daily, unstructured physical activity and should not be sedentary for more than 60 minutes at a time except when sleeping

Pre-schoolers

3–5 years

- Preschoolers should accumulate at least 60 minutes daily of structured physical activity
- Preschoolers should engage in at least 60 minutes and up to several hours per day of daily, unstructured physical activity and should not be sedentary for more than 60 minutes at a time except when sleeping

*The above table is a summary of the guidelines outlined by NASPE.

Physical activity is defined as an increase in energy expenditure through the movement of large muscle groups (Steinbeck, 2001; Salmon, 2005). For older children and adults the more common forms of physical activity involve sporting teams and organised activities. In younger children physical activity is undertaken in bursts throughout the day which vary in both intensity and duration (Steinbeck, 2001; Salmon, 2005). Structured play includes ball games, obstacle games and hide-and-seek; unstructured play involves making cubby houses; while sitting and watching non-interactive TV and sleeping are classed as sedentary activities.

The time children spend in structured and unstructured play, the nature of this play and the benefits from it are difficult to measure. Temple and O'Connor (2003b) found in a FDC study that around 18 per cent of a child's time was spent in structured play, while 30 per cent was spent in unstructured play. In other studies, LDC staff reported that children were not as active as those in the previous five to 10 years; however, the children were found to be more active while attending the LDC than at home (Temple & O'Connor, 2003a; Pagnini et al., 2006). In an earlier study, a child's participation in fundamental movement skills was found to increase in the presence of a carer or adult (Taggart & Keegan, 1997).

The release of national, state and territory policies and frameworks provide the guidelines and incentives for which population-specific programs are developed. While those identifying the health and wellbeing of young children and their families as a priority have been released over the past five to 10 years, those addressing physical activity are even more recent, thereby resulting in limited availability of programs and resources not only for children aged birth to five, but also for those who attend childcare facilities. In contrast, the nutritional literature is relatively older, resulting in the development of LDC and FDC programs addressing issues including food safety and the nutrition status of children who attend LDC or FDC, such as the 'Start Right Eat Right' (Pollard, Lewis & Miller, 1999; Pollard, Lewis & Miller, 2001) and the 'Good Food for Children' programs (Sangster, Eccleston & Stickney, 2002; Bravo & Cass, 2003). This was also found to be the case more recently where the Weight of Opinion (Pagnini et al., 2006) report stated that early childhood centres are subject to government rules and regulations and have programs and policies in relation to healthy eating; but there was no mention of such mandatory requirements relating to physical activity (Pagnini et al., 2006). The inclusion of physical activity and teaching of gross motor skills were seen by the early childhood professionals as part of their core mission (Pagnini et al., 2006). As part of their daily curriculum, early childcare centres include activities such as dance, active games and ball games, and have climbing equipment and bikes available (Hands & Martin, 2003; Pagnini et al., 2006). While these activities are not specific physical activity programs per se, and therefore may not have been identified in the literature search, they do encourage active play for children attending a childcare facility.

Although the Queensland 'Moving with Young Children' workshops were the only physical activity programs identified in the literature specific for LDC and FDC, two programs that target children in the birth to five years age group were identified, 'Kids—"Go for your Life"' and 'Romp and Chomp', and thus may be utilised by these settings. 'Kids—"Go for your Life"' in particular is widely recognised throughout Australia.

The literature search also identified a number of physical activity resources that could be utilised by childcare professionals within LDC and FDC settings. However, the differing requirements, structures and accreditation between LDC and FDC would need to be considered. While it is not the intention of this paper to analyse the barriers and enablers of each of the childcare settings to undertaking physical activity programs for children aged birth to five years, it is necessary to highlight some of the factors referred to in the literature that may explain the lack of specific physical activity programs reported in the literature, and also contribute to the development of future programs for this age group.

Accreditation issues

Although the various state and territory regulations require both LDC and FDC to be licensed, it is not mandatory for the centres to be accredited unless they want to be eligible for childcare benefit funding. The accreditation schemes for both LDC and FDC are set and administered by the National Childcare Accreditation Council (NCAC). The LDC accreditation system is based on the NCAC Quality Improvement and Accreditation System (QIAS), while the FDC system is based on the Family Day Care Quality Assurance (FDCQA) system. Under both systems there are specific quality areas and principles that the relevant centres must meet. These quality areas and principles are a set of requirements that promote the delivery of quality child care. While there are no quality areas or principles that specifically relate to physical activity, there are two QIAS principles—"Principle 4.1: Staff encourage each child to make choices and participate in play; and Principle 4.6: Staff promote each child's physical abilities (National Childcare Accreditation Council, 2005)—"and one FDCQA principle—"Principle 3.5: Carers and co-ordination unit staff promote physical

competence in all children (National Childcare Accreditation Council, 2004)—that could be related to physical activity.

The NCAC vision is to provide 'quality childcare experiences for all children enrolled in childcare services in Australia' (National Childcare Accreditation Council, 2004; National Childcare Accreditation Council, 2005). Early life opportunities and experiences play a major role in laying the foundations for a child's future health, as they can influence a child's attitude and behaviour in many ways, including healthy eating and physical activity (Birch, 1999; Temple & O'Connor, 2003b). It is important, and in keeping with the NCAC vision, to include a physical activity quality area or principles within both the QIAS and FDCQA. Not only will this inclusion contribute to the delivery of quality child care, but it will also promote the development of LDC and FDC physical activity programs and resources. Many of the nutrition programs and resources identified in the literature refer to accreditation principles or are based on them, such as 'Guidelines for Food and Nutrition Policy in Child Care' distributed by the SA Child Care Nutrition Partnership (SA Child Care Nutrition Partnership, 2005), and the 'Menu assessments' service provided by Nutrition Australia (Nutrition Australia, 2006).

The need to underpin the practice with research

Effective program development requires a sound research base in order to identify specific areas that require attention. The literature indicated that limited research exists on the physical activity status of children attending LDC and FDC, the barriers and enablers of conducting physical activity programs within a LDC or FDC setting and the current physical activity practices undertaken and resources used by the LDC and FDC staff.

The specific needs and contexts

Unlike LDC, which provides centre-based day care, FDC provides day care conducted in the family home of the carer (Bravo & Cass, 2003; Montague, 2003) and as a result different factors need to be considered when developing programs for each setting. In the study conducted by Temple and O'Connor (2003b) in FDC, barriers to conducting physical activity by FDC carers included the lack of space in undercover or closed areas, transportation to parks, and the mix of children and babies' needs for sleep, resulting in older children having to undertake quieter activities (Temple & O'Connor, 2003a).

Childcare professionals from both LDC and FDC also identified their own abilities, experiences and knowledge (Temple & O'Connor, 2003a; Temple & O'Connor, 2003b) and parent attitudes to healthy lifestyles as barriers to effectively teaching and conducting physical activity (Pagnini et al., 2006). In all of these studies childcare professionals reported that access to best-practice guidelines, up-to-date resources (including books, pamphlets and games) and professional expertise would help them to educate both the children and parents and conduct physical activities in their respective centres, and thus be able to deliver quality child care (Temple & O'Connor, 2003a; Temple & O'Connor, 2003b; Pagnini et al., 2006).

Conclusion and recommendations

The aim of the literature review was to identify best-practice physical activity programs developed for LDC and FDC settings within Australia. Only a small number of programs and resources were found, and only one was developed specifically for LDC and FDC. The literature also identified the need for more research into the area of physical activity teaching and delivery in LDC and FDC. To ensure the development of successful programs it is necessary to consider the different features of LDC and FDC, particularly the availability of space in the FDC environment and the delivery of the training programs to improve understanding, knowledge and skills in this area. The review did not examine the current educational or training requirements for early childhood education courses in relation to physical activity and nutrition. An inclusion of physical activity principles in the QIAS and FDCQA accreditation systems will assist in promoting the development of programs specific to LDC and FDC settings. These developments will help childcare settings to continue to deliver quality care to Australian children and provide children with opportunities to foster a positive attitude to a healthy lifestyle.

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