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Walking the Talk? Teachers' and Early Years Practitioners' Perceptions and Confidence in delivering the UK Physical Activity Guidelines within the Curriculum for Young Children.

ABSTRACT

This study explored early years practitioners and teachers attitudes and confidence in delivering the UK Physical Activity guidelines (NHS, 2013) within the curriculum for young children (DfE, 2013, 2014). Using an online questionnaire; data were analysed using thematic framework and statistically. Fifty nine respondents came from early years settings including nurseries, pre-schools and primary schools. The findings suggest there is a lack of confidence in knowing what to do to support and sustain physical activity. Further research is needed to identify if this is a national trend, this is the next steps of our research, as is the development of resources to help support confidence and the delivery of physical activity for young children.

Keywords: Physical Activity; Perceptions; Young Children

Background to the research

The National Health Service (NHS) (2013) guidance on physical activity for children from birth to five suggests that children should not be inactive for long periods of time. The guidance specifies light and energetic activities for a period of 180 minutes are required by young children each day. There is no specification about how this should be measured or recorded by those adults working with children. Cramer, the Chief Executive of the Royal Society of Public Health (2015) stated that

School education from a young age should focus on the importance of active lifestyles and healthy diets to ensure our society is one that understands the relationship between diet and good health (no page)

Teachers in primary schools would refer to the Primary Education curriculum for England (DfE, 2013) for guidance on the requirements for physical activity in the subject of Physical Education (PE). The latest version of the PE curriculum makes reference to healthy lifestyles

in Personal, Health, Social and Emotional (PHSE) lessons, but there is no curriculum guidance about what sustained physical activity is and how it is defined. Similarly, the Early Years Foundation Stage (EYFS) curriculum (2014) under the learning and development areas, namely physical development, teachers and practitioners are required to provide opportunities for young children to be active, develop physical skills and to understand the value of physical activity. However, there is no clear advice on what is required or how frequently physical activity is required for children from birth to five years.

The lack of specific information about what constitutes appropriate physical activity and how this should be included in day to day classroom practice for teachers and practitioners may lead to ambiguity. If teachers lack confidence and competence in their capacity to teach and assess physical activity, this may lead to uncertainty for teachers and practitioners to ensure that young children are being active enough.

Research underpinning the curriculum requirements for schools and settings suggests that physical activity is critical for children's development and well-being. Field (2010: 7) proposed that:

by the age of three, a baby's brain is 80% formed and his or her experiences before then shape the way the brain has grown and developed. That is not to say, of course, it is all over by then, but ability profiles at that age are highly predictive of profiles at school entry. By school age, there are very wide variations in children's abilities and the evidence is clear that children from poorer backgrounds do worse cognitively and behaviourally than those from more affluent homes.

Howells, 2016, discussed the first seven years of life and identified that they are critical in children's development. Timmons et al. (2012) as a critical period for promoting physical activity, but they also highlighted that the amount needed for healthy growth and development is unclear. Children's physical development is connected to all other domains of development, and Roeber et al. (2012) highlighted the importance of physical activity and movement on children's development. Specifically, Roeber et al. (2012) found that children who have difficulties in physical activities, such as crossing the midline, may lead to exclusion

from social activities impacting on play, social competence and decreased self-esteem (Howells, 2016).

Teachers Beliefs and Attitudes

Understanding the beliefs and attitudes of teachers is critical in ensuring that their actions match their perceptions. The teachers and practitioners, as the adults implementing and role modelling physical activity and supporting the children's development, It is well established in the literature that the beliefs and perceptions of teachers impact on their actions, and that there are intrinsic and extrinsic factors that enable or prevent teachers from acting in accordance with their beliefs (e.g. Nespor, 1987, Pajares, 1992; Stipek and Byler, 1997, Meehan, 2007). Beliefs can be defined as a form of knowledge which can be adapted to a range of contexts which act as a compass or road map providing direction for decision making (Meehan, 2011). Teachers' beliefs have been described as 'windows on teachers' decision making, practices and effectiveness'. Rimm-Kaufmann et al (2006) suggested that seven elements constituted a definition of beliefs.

1. Based on judgement, evaluation, and values and do not require evidence to back them up
2. Guide their thinking, meaning-making, decision making and behaviour in the classroom
3. May be unconscious such that the holder of beliefs is unaware of the ways in which they inform behaviour,
4. Cross between their personal and professional lives, reflecting both personal and cultural sources of knowledge
5. Become more personalised and richer as classroom experience grows
6. May impede efforts to change classroom practice and
7. Are value-laden and can guide thinking and action (p. 143).

Teachers are 'meaning makers' and their beliefs or perceptions underpin their daily practice (Bondy, et al. 2007; Erricker, et al. 1997; Meehan, 2011; Pintrich, 2002). Teachers and early childhood practitioners are responsible in their roles for others' learning. There is a well-

established link between the quality of teaching and the impact on children's learning (e.g. Blanton, et al. 2003; Bondy et al., 2007). This is critical in the area of physical activity because the teacher or early childhood practitioner has the opportunity to support children's skill development, performance with regard to physical activity and this is closely linked to children's feelings of efficacy and self-worth (e.g. Pajares, 1992).

The relationship between beliefs and practice is complex and well-documented in the literature (e.g. Charlesworth et al., 1991; Meehan, 2007; Meehan, 2011; Stipek & Byler, 1997). There is usually congruence in the relationship between beliefs and practice, but a mismatch may occur due to a number of intrinsic and extrinsic factors (Meehan, 2007). The intrinsic factors may include a "teachers' beliefs and knowledge (both theoretical and practical), values and ethical positions, impact of stress, experiences as a teacher and student, attitudes towards learning and learners, and feelings associated with self-worth, self-efficacy, self-esteem and locus of control" (Meehan, 2007). By contrast, the extrinsic factors may include the teachers qualifications, work context, familiarity with curriculum subject knowledge, and access to continuing professional development (e.g. Abbot-Shim, et al., 2000; Cassidy & Lawrence, 2000; Delaney, 1997; Meehan, 2007; Rimm-Kaufman et al., 2006; Vartuli, 1999; Wilcox-Herzog & Ward, 2004) .

Why is Physical Activity important in the early years?

In order to appreciate the complexities of children's physical activities, an understanding of the definitions is required. Howells (2015: 143) suggests that

views differ as to what is meant by physical activity, yet most agreed and viewed physical activity as a 'complex' term.

Howells (2016) continues and shares that the Department of Health (DH) (2005) and the World Health Organisation (WHO) (2010) recommended that children are physically active for 60 minutes a day at an intensity level of at least moderate, with moderate physical activity has been described as when the body begins to sweat and breathing increases (Topendsports, 2011). Howells (2017) discussed examples of types of activities that would be regarded by NHS (2011) and DH (2011) as being at a moderate intensity are brisk walking which increases

to jogging, running, playing football, bike riding and other games. Research into the intensity levels of children's physical activity is important as the intensity level of physical activity achieved is difficult to judge visually for not only the children themselves but also for parents, teachers and researchers (Kolle et al., 2009).

It has recently been found in a study of 2,976 families that parents find it difficult to spot obesity levels in their children. The National Child Measurement Programme figures for 2013 / 2014, show that one in five children aged 11 (at the end of primary school) are obese and a further 14% of these children are overweight. Gately et al. (2012) found that 75% of parents underestimate the size of their overweight child, while 50% underestimate the size of an obese child. They also found within a similar study of healthcare professionals that these healthcare professionals produced nearly the same results (Smith et al. 2008).

Teachers are in a unique position to not only support children and their families with physical activity, health and well-being but they are potentially a significant role model. Howells (2007) proposed that pupils need for positive, motivated and enthusiastic role models, in particular the class teachers within a primary school setting to allow them to understand the benefits of regularly participating in physical activity and will be comfortable about wanting to continue with such activities throughout life. However, Newton and Tarrant, (1992, p.14) suggested that teachers who are "unhappy, stressed, workaholics are not good role models for young people" especially for promoting physical activity, if teachers themselves do not have time to be physically active for health benefits. This conflict of thinking and acting may impact on practitioners' and teachers' confidence and competence at enhancing physical activity, health and well-being for the children.

The greatest challenge for teachers appears to be linked to their knowledge and skills and their ability to deliver a physical activity curriculum confidently. Howells (2007) proposed that confidence and competence of practitioners and teachers to integrate 'well-being' within the learning settings has been reported as being low. This may be due to them not having high subject knowledge. Manning-Morton (2014) suggested that children's life chances are improved by focusing on well-being in their earliest years. This includes working with parents

and families, and being aware of the environmental contexts that may impact on children's well-being. The key is for practitioners and teachers to know how to implement these ideas effectively as these key workers have a profound effect on young children as role models and due to the time of waking hours spent with them. Children spend half their waking hours, up to seven out of their fourteen hours, within the primary school setting (Owens et al., 2000) and more within early childhood settings. Therefore, school life and time within early childhood settings has the potential to have a significant impact on primary aged children's lives due to the amount of time that is spent at school and in the early childhood settings (Howells, 2011). This only leaves the children between five and seven hours outside of school while they are still awake (Breus, 2008).

The pressure on primary schools and early childhood settings to be responsible for providing the appropriate physical activity levels is not surprising, however, practitioners and teachers may not know how to support children's physical activity needs. It is proposed from the research outlined that physical activity is complex and therefore practitioners and teachers may not all feel confident and competent at ensuring sustained physical activity occurs and energetic activities are provided within educational settings that they are in leading and managing. The aim of this study is to examine the perceptions and confidence of early years practitioners' and teachers' delivering physical activity within the UK to young children.

Methods

The research questions for this study were:

- Do teachers feel confident delivering the English Physical Activity guidelines in early years settings schools?
- Is there a difference between early years' practitioners and teachers in confidence levels?
- Are teachers/practitioners walking the talk and being physically active (being a role model)?

An instrument was developed to measure early years' practitioners and teachers' perceptions about physical activity and its importance in the daily classroom practice with young children. Specifically, the Physical Activity, Health and Well-being Questionnaire (PAHWBQ) instrument

with 25 items measured six scales (see Appendix 1) and collected information about the participants. The scales included the following:

1. Early Childhood Practitioners and Teachers' understanding about physical activity
2. Early Childhood Practitioners and Teachers' beliefs about the nature of physical activity;
3. Early Childhood Practitioners and Teachers' own personal understanding of the their own
4. Nature of learning of physical activity as a curriculum area
5. Physical activity as a curriculum area
6. Nature of teaching of Physical Activity as a curriculum area

Demographic details of the participants, such as age, gender, teaching experience and setting type/curriculum were also collected.

The quantitative research design involved the use of five point Likert scales (Anderson, 2004) that measured practitioners and teachers' perceptions about physical activity and their classroom practice, Anderson (2004) suggested that "Likert scale is one of the most useful questions forms" (p. 174).

Recruitment and sampling

The questionnaire was distributed online using Google survey to early years practitioners and teachers. The survey was promoted through networks, using the University's communities of practice for Early Years and Primary Education alumni and social media channels such as Facebook and Twitter. The respondents' demographic details were coded to protect their confidentiality, a process suggested by Berg and Latin (2008) as good practice. Respondents were informed about confidentiality and the right to withdraw and informed consent was gained through the students opting in to completing the questionnaire. Ethical clearance was given by Canterbury Christ Church University and the questionnaires were kept confidential and anonymity was maintained.

Data analysis

This paper focuses on the practitioners' and teachers' responses to their own perceptions and confidence in presenting themselves as a role model and the confidence levels in delivering a wide variety of structure physical activities to support sustained physical activity within their educational settings. A two part analysis was undertaken, statistical and thematic. The statistical analysis included the following analytical steps:

- Step 1 - factor analysis was used to reduce the number of variables to ascertain the number of factors that had significance in this study and required further investigation.
- Step 2 - the reliability of the scales was calculated and Cronbach Alphas were used to ascertain the internal reliability of each scale. At this stage it was determined that 2 scales were reliable and would be fully reported.
- Step 3 - the level of agreement between scales was determined by computing the mean scores and range of responses for each scale.
- Step 4 - an analysis of the demographic data using an Analysis of Variance (ANOVA) was selected to compare group means.

Our thematic approach followed the following analytical steps:

Given that four of our six scales were not deemed to be reliable due to their Cronbach Alpha scores, the data was reviewed using key themes from the literature to help make sense of the results. The Cronbach Alpha scores were deemed unreliable possibly due to the small numbers of respondents, with more respondents it is likely that the results would be more reliable and this is suggested for further research.

To make sense of the data, a comparison between the different educational settings including nursery / pre-school, key stage one (infant aged children from 4 – 6) key stage two (junior aged children from 7 – 11) was undertaken. Comparison was also possible between gender and age of participants as well as length of time within the setting.

Results

Details of the participants who completed the online questionnaire are provided in table 1.

Insert table 1 here

Statistical analysis

Within the factor analysis, 2 items from the original listing of 25, were removed from the statistical analysis for thematic analysis. This was because the data for these items were identified as impacting across all scales, for all genders, all ages, all years of experience and all setting situations. These items were:

- Children in my physical activity class often repeat the same selection of activities
- Physical activity in my setting includes me sharing my personal experiences

Therefore, the following factor analysis was completed on 23 items (see table below) and the six scales presented below within the table. The 6 scales are:

- 1- Early Childhood Practitioners and Teachers' understanding about physical activity
- 2 Early Childhood Practitioners and Teachers' beliefs about the nature of physical activity;
- 3 Early Childhood Practitioners and Teachers' own personal understanding of the their own
- 4 Nature of learning of physical activity as a curriculum area
- 5 Physical activity as a curriculum area

6 Nature of teaching of Physical Activity as a curriculum area

Insert table 2 here

Research Instrument Reliability

Following the scales' identification from the above factor analyses, scale reliability was tested. Reliability refers to the ability of the instrument to consistently measure accurately (Burns, 1997; Neuman, 2000) and reflects the degree to which the scales were internally reliable. The Cronbach Alpha was used as it is a statistic that indicates internal consistency. The guidelines presented in Table 3 have been proposed by DeVellis (2003) regarding acceptable reliabilities for research instrument scales:

Insert table 3 here

Reliability analysis was performed using SPSS Version 23.0.0.3. Table 4 presents the number of items in each of the six scales and the Cronbach Alpha for each scale. Using DeVellis' (2003) table (table 3) the data showed minimally accepted scores were for identified for only -

- 1- Early Childhood Practitioners and Teachers' understanding about physical activity
- 2 Early Childhood Practitioners and Teachers' beliefs about the nature of physical activity

Insert table 4 here

Thematic results

The 2 items that were removed from the statistical analysis that were deemed worthy of consideration thematically as they appeared in all of the demographic data were:

- **Children in my physical activity class often repeat the same selection of activities**

Sixty percent (60%) of early years' practitioners and 45% of key stage one (infants) teachers and 45% of key stage one (juniors) teachers repeat the same selection of activities with young children. Indicating that there is slightly more confidence in primary school teachers delivering sustained physical activity. Those participants who had had 15+ years' experience within the setting, reported that they were able to vary the structured physical activities the most. By comparison, those participants who had 10 – 14 years' experience within their age phase often repeated the same selection of activities. This group appeared to be the least confident in terms of varying the nature of physical activities used in their setting.

- **Physical activity in my setting includes me sharing my personal experiences**

One hundred percent (100%) of male practitioners and teachers reported that they saw themselves as a role model and completed sustained physical activity themselves. By comparison, 55% of female practitioners and teachers had this view of themselves. With regard to holding a view of themselves as a role model, Key Stage 2 teachers were the most confident (75%) compared with Key Stage 1 teachers (65%) and Early Years practitioners (33%). Interestingly, teachers and practitioners with more than 15 years teaching/practice experience, reported that they were least confident in presenting themselves as role models and at the same time they were the participants who varied the structured activities the most.

Discussion

Teachers' perceptions, knowledge, skills and personal qualities impact on their classroom practice. A teacher's actions and perceptions underpin their daily practice, in particular, the quality of teaching and learning and the link to children's experiences and outcomes (Bondy et al, 2007). Teachers as role models (Howells, 2007) for young children in the area of physical activity, play a vital role in children's self-efficacy and self-worth. This is mirrored by the teachers' feelings of self-efficacy and self-worth in delivering physical activity in their curriculum (Pajares, 1992), in terms of their confidence and competence. For example, the data presented in this paper suggests that although the majority of participants did report that they were role models for physical activity (in particular the male participants). The participants identified that they themselves undertook sustained physical activity, yet there

were still significant numbers who did not feel that they themselves were able to be role models and therefore not walking the talk. Some of the reasons indicated for this lack of physical activity, may be due to a perceived lack of time outside of work to undertake physical activity themselves or they were not confident in presenting themselves as such role models. An additional factor, may be due to the age of the participants. Those teachers/participants with 15 or more years teaching/practice experience were also the majority who were at an age where they were most likely to also have family commitments which may impact on their time for physical activity participants. This is supported by the findings of the British Heart Foundation (2014) that suggested that some psychological barriers to engaging in physical activity, may include a perceived lack of time, lack of interest, effort required or other pressures such as social and environmental factors.

As identified previously, the relationship between beliefs and practice is complex (Meehan, 2007). The findings of this study suggest that a mismatch between intrinsic and extrinsic factors may be observed. This was evident in the data which indicated a lack of confidence in teaching physical activities that allowed for sustained physical activity. The results might suggest that there is a gap between teachers' beliefs and knowledge, both theoretical and practical (Meehan, 2007) in terms of understanding what is physical activity and how to implement a range in their physical activity curriculum. This may be due to a paucity of supportive resources to help participants in the development of activities for young children that ensure children have opportunities to engage in sustained physical activity as proposed by the NHS (2013). As a consequence of this lack of resources, participants may repeat the same activities again and again with the children because of the mismatch between teachers' beliefs and knowledge.

It is important for young children to have structured physical activity sessions, as Howells (2016) identified that Jess and Dewar (2004) proposed that the place children learn how to move is within such structured sessions. Wellard (2012) highlighted physical activity sessions as a place for children to become comfortable with their own bodies and Laker (2001) suggested it as a key place for children to grow socially and emotionally. Without these types of sessions the young children would be missing out on valuable opportunities that would

enhance and extend their learning. The number of skills and areas that can be developed during physical activity seems to be numerous and ever increasing (Howells, 2016).

Physical activity is not a single simple behaviour, but it is important to recognise the potential opportunities and the impact that early years and primary school settings have to engage children in physical activity. As identified earlier by Timmons et al. (2012) that the early years is a critical period for promoting physical activity, as Howells (2012) suggested it is a time and place for young children to form habits, likes and dislikes that may develop into lifelong participation in physical activity. Therefore it is important that our early years' practitioners and teachers are able to be confident in their delivery of physical activity and engagement as a role model for the young children.

Strengths and Limitations

The results of the study provides a novel and useful insight into the early years' and teachers' knowledge and perceptions of current practice within the south-east England, which can influence and inform University practice to help support new practitioners and teachers. A strength of this study is that the online questionnaire allowed for flexibility to enable working practitioners and teachers to participate at a time suitable for them. One of the limitations of this study is that by using just a likert scale, there is no information as to how early years practitioners and teachers feel they need to change or improve their confidence levels. Further studies will include a more in-depth exploration and reflection of teachers and practitioners confidence and competence in this area.

The data presented adopts a positivist approach and provides information which identifies that early years' practitioners and teachers are not confident in supporting children in sustained physical activities, but it lacks the next steps in terms of applying and understanding the information. To further extend this understanding, a larger scale questionnaire with both likert scale and qualitative data is needed and is planned as a follow up study.

Conclusion

- **Are teachers/practitioners walking the talk and being physically active (being a role model)?**

The data presented in this paper suggests very positively that it is possible for early years' practitioners and teachers to be confident in being a role models for physical activity within young children's educational settings. However, many of the respondents indicated that due to a perceived lack of time outside of work to undertake physical activity themselves so they were talking the talk but not always fully walking the talk.

- **Is there a difference between early years' practitioners and teachers in confidence levels?**

The data presented in this paper suggests that the confidence levels were lower than expected in terms of the variance in physical activities that could be undertaken within the settings to help support and develop sustained physical activity, with the most experienced often having the least variance in activities used. This small scale research highlights that practitioners and teachers would benefit from further support in boosting confidence in being both a role model and also in delivering a greater variety of physical activities.

- **Do teachers feel confident delivering the English Physical Activity guidelines in early years settings schools?**

It is suggested from the data presented in this paper that clearer messages about what is physical activity, what is sustained physical activity and activities within young children's educational settings is needed to be developed to ensure confidence in delivery of such sessions to allow all children to succeed.

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Appendix 1: Walking the Talk items

		Strongly	Disagree	Neither	Agree	Strongly
1	I see myself as a role model for physical activity in my setting.	1	2	3	4	5
2	Physical Activity is a planned session that occurs daily or weekly.	1	2	3	4	5
3	Physical activity should be inclusive and respectful of difference.	1	2	3	4	5
4	Physical activity in my setting includes me sharing my personal experiences.	1	2	3	4	5
5	Physical activity in my class includes age-appropriate learning activities.	1	2	3	4	5
6	Physical activity in the early childhood is about providing the foundations for later learning.	1	2	3	4	5
7	Physical activity is a curriculum area that allows students to learn about concepts associated with health and well-being.	1	2	3	4	5
8	Physical activity should include diet and healthy foods.	1	2	3	4	5
9	Physical activity is a key component of everyday schooling.	1	2	3	4	5

10	Physical activity should promote the development of the whole person.	1	2	3	4	5
11	Physical activity in my class encourages children to ask questions about their body.	1	2	3	4	5
12	Children in my physical activity class often repeat the same selection of activities	1	2	3	4	5
13	Physical activity should foster positive attitudes towards exercise and eating healthily.	1	2	3	4	5
14	Physical activity is a curriculum area with specific content to be covered.	1	2	3	4	5
15	Physical activity includes teaching children the difference between right and wrong choices in health.	1	2	3	4	5
16	Building relationships based on care and trust underpin my Physical activity program.	1	2	3	4	5
17	Physical activity for the children in my class should include the use of concrete materials.	1	2	3	4	5
18	I use units of work/ syllabus documents provided by my local authority/setting as a basis for planning physical activity.	1	2	3	4	5
19	I believe schools should support positive attitudes towards physical activity and healthy living.	1	2	3	4	5

20	My physical activity program is planned before I commence the school year/term and is followed closely.	1	2	3	4	5
21	Physical activity in my class is integrated into the rest of the curriculum.	1	2	3	4	5
22	I use concepts or themes in the curriculum as ways for children to make links with physical activity concepts.	1	2	3	4	5
23	My Physical activity programme is developed as I get to know the children in my group.	1	2	3	4	5
24	Movement is an important component of Physical activity.	1	2	3	4	5
25	I feel confident in planning and structuring physical activity for my class.	1	2	3	4	5

