

ECEY5010: Research for Learning

Research Question:

“The relationship between outdoor play and physical activity levels in children ages 0-5 years.”

Abstract

This research project will explore the effects of outdoor play, learning and the relationship it has with physical activity levels in children aged five and under. In-depth research from other sources will be critically analysed to get a better understanding of both the advantages and disadvantages of outdoor play for children and the importance of children in their early years being exposed to such environments. The research can help practitioners to understand and develop practice as well as helping to further benefit children's physical activity levels. Undertaking this research with children directly in early years settings is important in order to collect in-depth observations and collect valid reliable data. The research project will consist of collecting qualitative data through entering two early years settings and directly observing children engaging in physical activities, in both indoor and outdoor environments. By visiting one early years environment that is primarily outdoor learning as well one which has little access to outdoor learning will help to compare the physical activity levels in children and analyses the benefits and drawbacks of both.

Ethnographic research will be undertaken using a mixed method approach which will consist of direct observations of children and interviews with practitioners. When developing this research project ethical considerations will need to be taken into account these include ensuring confidentiality and anonymity is honoured when appropriate. Parental consent will need to be collected to enable observations to be taken on children within the early years centres as well as confidentiality of those participating in the interviews where permission for the data collected to be analysed and become part of research needs to be considered. This will be ensured through the Data Protection Act 2018 which sets the rights of those participating.

A Literature Review

The reasoning behind this research project is to understand the effect outdoor environments have on young children's physical activity levels and whether these environments make positive contributions to children's learning and development. Dowda et al (2009) argue that children's environments have an impact on activity levels, with schools that have more outdoor space and less fixed equipment lead to children having significantly higher levels of physical activity. Mygind (2007) found that forest school environments had a significant impact on the level of physical activity in children therefore arguing that outdoor learning environments along with indoor should be combined in order to positively impact physical health in children. According to Waite(2011) during early years foundation phase physical education plays a crucial role in helping children to develop their fundamental movement skills.

Doherty and Bailey (2003) highlight research that indicates an appropriate level of physical skills and activity, enhances self-esteem which emphasises the feelings of wellbeing and confidence. Therefore, the use of the outdoor environment for children's overall wellbeing is important. These skills are more attainable with the positive use of outdoor environments. The prevalence of outdoor education suggests that policymakers, outdoor educators, teachers, parents and children themselves believe these activities to be of value to physical development.

Dyment and Coleman (2012) through their research argue the influence of early years educators can have both negative and positive impacts on children's physical activity levels. They founded that through observations early years educators spent more time concerned about safety than assisting children with their physical development. They suggest that children learnt through child-initiated activities outdoors but with the support of early years educators providing better provisions the rate of physical activity levels would increase.

One study published in the international journal of environmental research and public health (Becker et al., 2017) suggests outdoor learning activities, such as nature walks and games, can increase physical activity levels in children and promote healthy habits, as well as improving children's cardiovascular health, muscle strength and coordination.

Early years frameworks and policies, such as the early years foundation stage, state the requirements of childcare settings are to provide children with access to an outdoor area to play and learn. If this is not possible, the settings should ensure physical activities are planned and occurring on a daily basis indoors. According to the National Health Service (NHS) physical activity guidance, children should undertake 60 minutes of moderate or vigorous physical activity per day, across the week. Childcare settings should ensure they are contributing to this number by providing children of all ages with access to enriched outdoor areas so physical development can be built. The foundation phase in Wales has similarities with the foundation stage in England and outlines in its framework that all children require to be able to explore and investigate outdoor learning environments in order to develop their gross and fine motor skills.

Whilst the benefits of outdoor learning for children's physical development is widely researched and recognised, there is in fact limited research regarding the negative effects that outdoor environments have. There is also little regarding the negative effects the outdoors has on a child's physical development. A few potential negative effects have been identified which argue safety concerns and environmental hazards, however, these potential negative effects are regarded as being relatively minor and can be generally mitigated by proper planning and supervision.

A study by the University of Edinburgh stated in their findings that children are in need of the physical environment in order to practice new skills and develop their bodies. However children still require the support of practitioners and carers when taking part in risk taking. This can lead to children becoming more confident physically by climbing a little higher, running a little faster or jumping a little further. Concluding that during their research they found that children's wellbeing improved by being outdoors regularly as well as their confidence being built through freely playing outdoors, building problem solving skills and managing boundaries.

The value of play linked with learning outdoors is important in early years. Froebel in Lilley (1967) argued the child should experience nature in all its aspects and forms.

Energy, substance, sound and colour. Studies by Froebel have lead practitioners onto adapting areas of learning and argue that the quality of the environment and the interactions within it are crucial.

Methodological Considerations

There will be two sample methods chosen for this research project. An overt observation on six children from two different childcare settings alongside voluntary face to face interviews with early years practitioners within those settings. The two settings I will chose will have a number of differences. One will be a primarily outdoor based setting with extensive access to the environment whereas the other will be a setting with basic access to the outdoors. The chosen settings are to reflect on whether the outdoor learning environment is key for children's development or whether children will develop the similarly without the need for outdoor learning.

According to Shortcuts TV (2018) sampling comes from the target population where a select number of individuals are chosen. The representativeness is argued to be the extent in which the sample reflects the target population. Generalisability needs to be taken into account when understanding sample choices and their probability. As it is the extent to which the data founded from the key samples can be applied to the target population. The more representative the sample the more the research can be generalised. Furthermore, probability sampling also regarded as random sampling ensures equality by the target population having an equal chance to be selected for the sample. Probability sampling is carefully analysed and has benefits which include generalisation, measurement opportunities and can be regarded as more reliable. However, its disadvantages are the high rates of attrition and may in some cases not be practical. Non-probability sampling will be used in this research project through opportunity sampling where all participants will be asked prior to research whether they want to take part. This is where vital consent will be requested prior to the research beginning.

When undertaking research with young children it is important to consider the formats and methods used and whether the data collected is qualitative or quantitative. This research project will be targeted and consist of a mix of both qualitative and quantitative research data. Also known as mixed method research, which will increase validity of the findings. According to Tashakkori and Creswell (2007), mixed method research needs to consist of the two sub studies, however they argue that some consistencies can arise when one considers how the two sub studies are related. The interviews within this research project will be semi structured and consist of open-ended questions in order to give variety and opportunities for opinions on the selected subject of the importance of the outdoors to physical development levels.

The term qualitative research can have different meanings to different people (Denzin and Lincoln, 1994). According to Jarvie (2015) qualitative research or qualitative study consists of an in depth analysis of an issue, entity and process including literature reviews that draw together findings from a number of studies and high quality qualitative research requires high levels of skill and judgement. Harrison and

Wang (2018) suggest research in early childhood education has witnessed an increasing demand for high quality large scale quantitative study. The methods used within this research projects are voluntary practitioner interviews and direct observations with children both will take place within their settings. Using semi structured and open ended research methods and overt observation methods together pose negatives and positives. Stated by childhood studies usually rely more on observation methods when researching and choices of illiterate populations can be gathered through interviews. Observational research can come in two forms. Participant and non-participant and structured and non-structured. The advantages of these research methods are it provides direct information about the behaviour of individuals or a group and can help to develop a holistic perspective, assisting in gathering data when the situation is real and not artificially set up. However, on the other hand it does pose its limitations which include observer not being able to note down all data whilst observing, it can be regarded as time consuming, and children may alter and change their behaviour either positively or negatively due to being aware they are being observed. Adams (2015) argues the limitations of semi structured interviews as being costly and a time-consuming process from getting permission and consent to then having time to undertake the interviews to high standards. It is important that interviewers are smart, sensitive and knowledgeable on relevant substantive issues in order to avoid any bias and maintain professionalism. Semi structured interviews are superbly suited to early years research and in mixed method approaches they can be useful as an adjunct to supplement and add depth to other approaches.

According to the association of qualitative research (n.d.) the Hawthorne effect is where individuals change and modify aspects of their behaviour as a response to being aware they are being observed. The term was created in the 1950's by Henry A Landsberger. The use of the Hawthorne effect when researching in early years can pose complications especially where children may negative change behavioural traits if the observations are overt or refuse to participate. It is also critical to research to consider as a researcher the halo effect. Where there may be a tendency to allow one specific trait to make overall judgements, this can lead to incorrect stereotyping, inconsistencies, and unreliable findings. Cherry, K. (2022) suggests the halo effect impacts education where research found that some teachers will treat students differently based on differences including intelligence. Therefore, this poses limitations when researching as researchers may enter the settings with pre assumed ideas and expectations which can lead to incorrect judgements and methods being adjusted negatively based on opinions, making any research findings inconclusive.

Triangulation is regarded as a method used to increase the credibility and validity of research findings. Triangulation by combining theories, observers and methods in a research study can help ensure fundamental biases arising are overcome (Noble and Heale, 2019). Triangulation can enrich research as it can offer a variety of datasets to explain and expand differing aspects of a phenomenon or interest. It refers to the use of multiple data stored or methods of qualitative research in order to develop a comprehensive understanding, (Patton, 1999). This research project will promote triangulation with its relations to childhood physical development. Both methods used will increase validity and can help determine the facts and the opinions in order to come to solid reliable conclusions.

Ethical Considerations

Palaiologou, I. (2012) states within research acknowledging that our youngest children are able to effectively participate, share feelings and make valuable contributions is essential. The researcher has a key role and responsibility to ensure that the best interest of the child is paramount and takes upmost priority. According to the NSPCC (n.d.) if a child is not fully able to consent and understands the consequences of taking part but does express a willingness to participate it may be appropriate to seek their assents consent. An assent is someone who can talk on behalf of the child and their rights this is usually in most circumstances a parent or carer. Consent should also be sought from these individuals before any research is taken place. Children also have a right to decide against involvement at any time and their views should be protected and respected (Article 12, UNICEF, 1989). Furthermore, if a child does not consent to the research for whatever reason this overrides the consent that may have been given by the assent. The NSPCC state that all research projects should have a complaints procedure, and this should be discussed at time of consent and continuously promoted throughout the study and after.

A researcher commits to a wide range of responsibilities when they decide to undertake any type of research. Nolan, A., Cartmel, J. and Macfarlane, K. (2013) argue that care needs to be taken into consideration to ensure that both the site and participants are able to be reunited in an ethical manner. Participants rights need to be upheld, information will need to be treated confidentially and different views and cultures acknowledged in a respectful manner. Ethical committees of any organisation involved will need to be contacted prior to research taking place and a research proposal will be carefully examined on its ethical merit. Without this the research project may be unable to go ahead especially if issues of an ethical nature arise. Coffelt, T. (2017) argues the issues surrounding confidentiality must be addressed including the need to summarise the procedures undertaken. To add the potential risks need to be understood by all such as physical, psychological, emotional and legal risks and their outcomes. This is regarded as ethical risk analysis and is key. A consent form for signing should be when the research project is being explained to organisations and their participants. These will be used within this research project due the voluntary informed consent needed for the practitioner interviews.

Smith (2007) states access to children to enable researchers to invite them to participate in research studies is vital. Reluctancy for children to take part can be influences by risks that their assents argue aren't worth taking which can include the fear of the child being negatively portrayed and seeing them as vulnerable with the strong need to protect them. Emphasis on confidentiality and anonymity are vital when understanding ethical considerations. Coffelt, T.(2017) argues that ethical practices are designed to protect the privacy of human subjects while collecting, analysing and reporting data. Typically, anonymity is the procedure followed in quantitative studies. Ethical research involving children suggests that respecting children's confidentiality includes their privacy regarding how and what information

the child wants to share, including the privacy of the information gathering and storing. Ensuring that it is kept confidential at all times due to the nature of the study and whom it involves. This help to ensure that participants are not identifiable in publication and dissemination of findings. This is particularly important when researching early years as it is the right of the child for their information to be kept confidential mirroring the safeguarding and confidentiality of their personal information within settings. Protecting the child and their rights at all times. If confidentiality is compromised and isn't prioritised it can pose the risk of the information being leaked and lead to participants and their assents being identified. Children's personal information requires particular consideration of storage and processes. Personal information should be stored securely abiding by data protection policies and only be accessible for those who are authorised (National Children's Bureau, n.d.). While anonymity is regarded as the norm it is important to acknowledge that some children participating may want to be identified in relation to the research and its findings. However, consideration of potential threats should be carefully analysed in order to reduce the risks to both the organisation, participants and researchers. Organisations names and addresses should always be protected alongside ethical procedures being followed. The need of the research must not subsume ethical responsibilities towards children who may be at risk in any way. Alongside protecting and minimising risks of the participants of those in this study it is important to analysis what information will be readily available to the public, the findings from the observations being used to compare physical activity levels in children aged five and under it is likely that different early years organisations may want to access the findings so that analyses and comparisons can be made which can potentially lead to childcare frameworks and requirements being altered to positively change outcomes.

An article from Sheffield Hallam University (n.d.) states that safeguarding when researching involves participants being protected from undue harm, obtaining full consent is first priority and ensuring participation is voluntary and not forced. However, in some cases conflicts may arise in terms of the agreeing of confidentiality when information is disclosed in interviews that may indicate potential harm to a child or children. Safeguarding would override the ethical considerations stated in this type of case. Under the children act 1989 states that partner agencies have a duty to help local authorities with abuse enquiries and have a key role in protecting children from any form of harm or abuse, it is regarded as a duty of care as early years practitioners and those around them.

When undertaking any sort of research, it is important to consider the risks and implications to the researcher and their organisations.

According to UWTSD (2022), they are committed to maintain high ethical standards in the research undertaken by both staff and students. Understanding its obligations under concordat to support research integrity to ensure that any research undertaken is conducted to appropriate standards and conforms to generally accepted ethical principles and practices of conduct and governance. Furthermore, taking into account researchers' safety and protecting individuals through the research project. On the contrary any research that doesn't abide to the ethical and methodological standards may lead to the university associated receiving a bad reputation as well as the researcher involved themselves. Putting the universities standards at risk of negative opinions. When undertaking this research project, a potential risk to the university could be adverse or negative publicity, this will come

apparent if the researcher does not abide by set rules and regulations of both the early years settings participating and the university. This can lead to showing not only the university in a bad light but also the researcher themselves meaning that future research projects may be disregarded to unreliability and dishonestly. To avoid this, it is vital for researchers to being educated on all research policies and procedures and for these to be clearly discussed with participants and their superiors who are in charge of the organisations in detail (UWTSD, 2022)

How data is collected and stored is important and has to fit in with current guidelines and legislation, relevant procedures should also be followed by law. According to the UWTSD (2022), anyone working in research needs to handle all associated data correctly. Laws such as the Data Protection Act 2018 which states that any participants in research is able to at any time access what personal information is used by businesses or organisations that may have a reason to store this sort of information (Gov.uk, 2018). Researchers are required to follow data protection principles founded in the Data Protection Act 2018 and they must make sure the information is used fairly, is accurate, used in a way that is adequate and handled in a way that ensures appropriate security. This research project will allow participants including parents and carers of children observed as well as those practitioners interviewed to view the information collected through the guidelines stated. Building trust and making individuals aware of their rights is fundamental for research. The general data protection regulations have seven key principles and is argued to be at the heart of the UK's Data Protection regime and links with the data protection rights of all individuals. As a researcher understanding these principles is vital because they will inform the structure of your data protection framework and guide positive decision making. The seven is made up of the following stated by DPO Centre (2021): lawful, fairness and transparency, purpose limitation, data minimisation, accuracy, storage limitation, integrity and security and lastly accountability. All research data collected and stored should be completed legally and abide by both participant rights, legislation requirements and the organisations guidelines. This research will inform the university prior to research beginning and pay close attention to their research guidelines in order to maintain professionalism. The British Educational Research Association are focused on advancing research quality alongside fostering research engagement. Developing policy and practice by positively promoting the best quality evidence produced by educational research which is vital to consider and understand as a researcher. Understanding foremost the rights everyone involved in research has is vital to provide an ethical experience.

Reference List

- (No date) *Foundation phase framework - HWB*. Available at: <https://hwb.gov.wales/storage/d5d8e39c-b534-40cb-a3f5-7e2e126d8077/foundation-phase-framework.pdf> (Accessed: 15 May 2023).
- Adams, William. (2015). Conducting Semi-Structured Interviews. 10.1002/9781119171386.ch19.
- Becker, C., Lauterbach, G., Spengler, S., Dettweiler, U. and Mess, F. (2017). Effects of Regular Classes in Outdoor Education Settings: A Systematic Review on Students' Learning, Social and Health Dimensions. *International Journal of Environmental Research and Public Health*, 14(5), p.485.
- Bera.ac.uk. (2019). *BERA*. [online] Available at: <https://www.bera.ac.uk>.
- Cherry, K. (2020). *How the Halo Effect Influences the Way We Perceive Attractive People*. [online] Verywell Mind. Available at: <https://www.verywellmind.com/what-is-the-halo-effect-2795906#:~:text=The%20halo%20effect%20is%20a>.
- Coffelt, T. ed., 2017. *The SAGE Encyclopedia of Communication Research Methods*. Vol. 4. Thousand Oaks, CA: SAGE Publications, Inc. Available at: <<https://doi.org/10.4135/9781483381411>>
- Core concepts in research. Sampling (2018). Leicester, England: Shortcuts TV.
- Crozier, Gill & Denzin, NK & Lincoln, YS. (1994). The Sage Handbook of Qualitative Research. British Journal of Educational Studies. 42. 409. 10.2307/3121684.
- Doherty, J. and Bailey, R. (2003). *Supporting physical development and physical education in the early years*. [online] Leeds Trinity University. Buckingham: Open University Press. Available at: <https://research.leedstrinity.ac.uk/en/publications/supporting-physical-development-and-physical-education-in-the-ear> [Accessed 4 May 2023].

Dowda, M., Brown, W.H., McIver, K.L., Pfeiffer, K.A., O'Neill, J.R., Addy, C.L. and Pate, R.R. (2009). Policies and Characteristics of the Preschool Environment and Physical Activity of Young Children. *PEDIATRICS*, 123(2), pp.e261–e266. doi:<https://doi.org/10.1542/peds.2008-2498>.

DPO Centre (2021). *The Data Protection Act 2018 - the 7 principles of the GDPR - Blog*. [online] Outsourced Data Protection Officers GDPR and Data Protection Compliance. Available at: <https://www.dpocentre.com/the-data-protection-act-2018-the-7-principles-of-the-gdpr/>.

Dyment, J. and Coleman, B. (2012). The Intersection of Physical Activity Opportunities and the Role of Early Childhood Educators during Outdoor Play: Perceptions and Reality. *Australasian Journal of Early Childhood*, 37(1), pp.90–98. doi:<https://doi.org/10.1177/183693911203700111>.

Gov.uk (2018). *Data Protection Act*. [online] Gov.uk. Available at: <https://www.gov.uk/data-protection>.

Harrison, L.J. and Wang, C. (2018). Current Approaches in Quantitative Research in Early Childhood Education. *International Handbook of Early Childhood Education*, pp.295–316. doi:https://doi.org/10.1007/978-94-024-0927-7_12.

Hayes, D. (2016) *The policy context for outdoor learning*, CYP Now. Available at: <https://www.cypnow.co.uk/features/article/the-policy-context-for-outdoor-learning> (Accessed: 15 May 2023).

<https://www.skillzone.net>, S.Z.L. (n.d.). *Definition: Hawthorne effect*. [online] Association for Qualitative Research (AQR). Available at: [https://www.aqr.org.uk/glossary/hawthorne-effect#:~:text=The%20Hawthorne%20effect%20\(also%20referred](https://www.aqr.org.uk/glossary/hawthorne-effect#:~:text=The%20Hawthorne%20effect%20(also%20referred).

Jarvie, Wendy. (2015). Qualitative Research in Early Childhood Education and Care Implementation. *International Journal of Child Care and Education Policy*. 6. 35-43. 10.1007/2288-6729-6-2-35.

Mygind, E. (2007). A comparison between children's physical activity levels at school and learning in an outdoor environment. *Journal of Adventure Education & Outdoor Learning*, 7(2), pp.161–176. doi:<https://doi.org/10.1080/14729670701717580>.

National Children's Bureau. (n.d.). *Guidelines for Research with Children and Young People*. [online] Available at: <https://www.ncb.org.uk/resources/all-resources/filter/bullying/guidelines-research-children-and-young-people>.

Neilson, E. (n.d.). *Breaking down barriers to outdoor play*. [online] Froebelian futures. Available at: <https://www.froebel.ed.ac.uk/project/breaking-down-barriers-to-outdoor-play-2/> [Accessed 21 May 2023].

Noble, H. and Heale, R. (2019). Triangulation in Research. *Evidence Based Nursing*, [online] 22(3), pp.67–68. doi:<https://doi.org/10.1136/ebnurs-2019-103145>.

Nolan, A., Cartmel, J. and Macfarlane, K. (2013) *Research in early childhood*. Los Angeles, Calif: SAGE.

NSPCC Learning. (n.d.). *Research with children: ethics, safety and promoting inclusion*. [online] Available at: <https://learning.nspcc.org.uk/research-resources/briefings/research-with-children-ethics-safety-promoting-inclusion#:~:text=If%20you%20don%27t%20seek>.

Palaiologou, I. (2012) *Ethical practice in early childhood*. Los Angeles: Sage Publications.

Patton, M.Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health services research*, [online] 34(5 Pt 2), pp.1189–208. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1089059/>.

Physical activity guidelines for children and young people (no date) NHS choices. Available at: <https://www.nhs.uk/live-well/exercise/exercise-guidelines/physical-activity-guidelines-children-and-young-people/> (Accessed: 15 May 2023).

SAFEGUARDING CHILDREN IN RESEARCH CONTEXTS. (n.d.). [online] Sheffield Hallam University. Available at: <https://www.shu.ac.uk/~media/home/research/files/ethics/safeguarding-children-in-research-contexts.pdf?la=en>.

Smith, A.B. (2007). Children's Rights and Early Childhood Education. *Australasian Journal of Early Childhood*, 32(3), pp.1–8. doi:<https://doi.org/10.1177/183693910703200302>.

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Tashakkori, A. and Creswell, J.W. (2007). The New Era of Mixed Methods. *Journal of Mixed Methods Research*, 1(1), pp.3–7.

doi:<https://doi.org/10.1177/2345678906293042>.

UNICEF (1989). *UN Convention on the Rights of the Child (UNCRC)*. [online] Unicef. Available at: <https://www.unicef.org.uk/what-we-do/un-convention-child-rights/>.

UWTSD. (2022). *Research Ethics & Integrity Code of Practice*. [online] Available at: <https://www.uwtسد.ac.uk/media/uwtسد-website/content-assets/documents/research/REICoP-July-2022.pdf>.

Waite, S (ed.) 2011, *Children Learning Outside the Classroom : From Birth to Eleven*, SAGE Publications, London. Available from: ProQuest Ebook Central. [5 May 2023].