

Abstract.

Wellbeing is vital to children's safety and can be influenced by the various environments which they experience (NSPCC, 2023). This research aims to understand the impact that outdoor experiences have on children's wellbeing, in order to inform good practice, through studying the effect of providing quality outdoor opportunities to two year one classes, across two settings, in the South Wales region. A thorough literature review will be conducted in order that a grasp of the views of theorists is obtained and an understanding of prior research is achieved. This will provide a solid foundation to further the research. The literature reviews will centre around the meaning of wellbeing and methods used to measure it. Following on from this, the literature reviews will also investigate how a sufficient outdoor environment should look. The gathering of data from participants will be achieved through teacher Leuven Scale observation and semi-structured interviews of the teachers, researcher observations of the children and pre and post study participant questionnaires. This methodology will ensure that mixed method qualitative and quantitative data can be gathered, so as triangulation can be exercised to check the strength and validity of the research findings. The researcher takes into consideration the ethical contexts of research with young children and will follow the guidance sought from University of Wales Trinity Saint David's and Ethical Research Involving Children throughout the research. All participants will understand that they are volunteers and as such they are able to withdraw from the process at any time.

Word count: 249

Literature review.

The importance of childhood wellbeing is gaining global recognition as discussed in Bradshaw *et al* (2013), who state that Unicef have recently commenced including children's subjective wellbeing within their studies. Moreover, Save the Children UK (2008) discusses the rights afforded to the wellbeing of children within the United Nation Convention for the Rights of the Child (UNCRC). These rights, specifically within article 24, place a duty on the government to ensure that children receive adequate wellbeing education. Additionally, Bradshaw *et al* (2013) state that the UNCRC places a duty on the government to take onboard the child's thoughts and feelings. Likewise, A curriculum for funded non-maintained nursery settings identifies the importance of wellbeing in terms of child development (Welsh Government, 2022). This research paper aims to investigate the impact of learning in outdoor environments on children's wellbeing, in order to inform good practice (Newby, 2014).

Statham and Chase (2010) state that there is no one definitive definition of wellbeing, therefore it is difficult to draw conclusions or comparisons from different studies. This can be seen in Save the Children UK (2008) Child Development index which aims to measure children's wellbeing. This index measures early childhood death rates, the numbers of primary school aged children enrolled into school and the numbers of children who are malnourished. This index places the UK within the top ten for children's wellbeing however does not take into consideration children's feelings by measuring children's subjective wellbeing. This is a view supported by Thévenon, Clarke, and Dirwan (2021) who state that wellbeing is complex and involves many layers, and as such if research into child wellbeing is rigid in its data collection then key information may be

missed. This is exemplified in Statham and Chase (2010) who discuss the UK's poor performance, in comparison to other countries, with regard to childhood wellbeing and go on to state that the complexities of defining wellbeing create different emphasis in policy.

Laevers (no date) describes childhood wellbeing as being contented and ready to learn due to a sense of pleasure and comfort. This is further explained by Laevers and Declercq (2018) in stating that wellbeing is influenced by children having their fundamental needs met, as within Maslow's hierarchy of needs and that when fulfilled this can lead to a stability in mental health. Furthermore, NSPCC (2021) places an importance on environments in the development of positive mental health in childhood. Additionally, during a review, Dankiw *et al* (2020) concluded that playing in nature is advantageous to child development. A view which is supported by Bateman and Waters (2018), who suggest that outdoor environments can support children's wellbeing when practitioners' approaches are supportive of the children's acquisition of resilience and confidence.

Montessori (no date) places high regard to offering nature and outdoor learning environments as these provide opportunities for spontaneity, to improve motor skills and intellect as well as the development of a love for nature and a more carefree and creative sense of play. This is a view supported by Froebel Trust (no date) who state that Froebel believed that encountering and playing in natural settings is vital to children's development of a knowledge and understanding of nature. Furthermore, Armbrüster and Witte (2022) state that outdoor learning provides a more relaxed boundary as well as a hands on learning approach which allows children to blur the lines between thought of as work or play.

Pretty *et al* (2005) discusses the negative consequences of inadequate outdoor green spaces on physical and mental health as well as hypothesising that improvements may be seen with greater emphasis placed on being outdoors as well as being physically active. Likewise, White (2014) places importance on an equality of indoor and outdoor provisions and opportunities to access these areas to support children's wellbeing. However, Pretty *et al* (2005) research study was carried out with the participants viewing pictures of urban or rural scenes, while exercising indoors using a treadmill. So it could be argued that the results gathered show the effects of exercise or physical activity and not the outdoor environment. Garrick (2009) discusses research which concludes that children's enjoyment of outdoor environments brings back positive memories and states that evidence shows that children place value on outdoor experiences as well as these experiences setting healthy habits for later life. Additionally, in support of these findings, Waite (2010) explores practitioner recollection of their outdoor experiences and found that the majority are positive. Waite (2010) continues to state that outdoor environments should be encouraged by policy writers to highlight their advantages.

Louv (2005) discusses "nature deficit disorder". It is suggested that with decreased interactions with the outdoors, there are increased mental health and wellbeing issues. Furthermore, Louv (2005) suggests that being outdoors can improve symptoms of emotional episodes, as well as ADHD, and suggests that explanations for this could be linked to the ability to move more while outside and the socialisation which is stimulated in nature.

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Methodology.

This research project consists of two schools within Caerphilly County Borough for ease of location. The schools were chosen based on their outdoor provisions, to ensure adequate space can be given to allow for meaningful outdoor play and learning provision, with similar class sizes. Montessori (no date) discusses that the environment needs to provide adequate space for free movement and enough greenery to ignite awe and wonder, however, it must not be too full or over stimulating. Dworkin (2012) states the importance of selecting the sample size to ensure that there are enough variables in the type of participants that are researched. Andrade (2020) states that ensuring a sample does not become too large is of equal importance as this would be costly, time consuming and unethical to the participants.

Bell and Waters (2018) states that restricting factors such as time and workforce should be considered prior to beginning research projects. To that end it was decided that two schools would allow for more in depth data than if studying just one setting such as providing data from different teaching methods, settings and a broader range of children, while also being manageable to the workforce conducting the study. This research study will take place over one school term, so as to allow practices to be embedded and give schools the opportunity to make use of the outdoor areas through many different weathers.

Year one participants, as well as the teachers from their classes, have been selected as they are able to articulate their opinions and feelings on their experiences. This is discussed in Vogl (2004) who states that children's communication skills make the most rapid developments between the ages of 5 and 7 years, however also states that researchers should be aware that language skills may still be limited. Moreover, Vogl (2004) also states that a limitation to researching with children of this age may be their eagerness to appear knowledgeable and therefore respond to questions despite not knowing what is meant by the question, rather than seeking further information.

According to Roberts-Holmes (2018) this method of sampling is known as purposive sampling (which is also known as non-probability sampling), whereby the researcher has personally chosen the settings to meet specific criteria. This means that there is no equal chance of settings being chosen and as such the data gathered in this way can not be used to make wider generalisations of the thoughts and feelings of the whole population (Newby, 2014). This is a view also supported by Berndt (2020). Moreover, Berndt (2020) states that limitations to non-probability sampling include the possibility of researcher bias, whereby the research participants are selected without a set standard. Additionally, according to Suter (2012) it is not possible for a research project to be completely unaffected by researcher bias for example having a positive attitude or prior experiences of outdoor learning could skew the research in favour of positive outcomes during observations. To that extent it is vital that the researcher is thorough and clear with the findings.

This research will entail mixed method research, in order to come to a more thorough understanding of the outcomes (Baran and Jones, 2016) with qualitative data being gathered from semi-structured interviews with the teaching staff from both settings. Teachers will be asked to undertake Lueven scale assessments of the children pre research, during the research and at the end of the research study, providing quantitative data of the participants wellbeing. This would entail the teachers rating the children's wellbeing and involvement based on outward signs of wellbeing, such as their activity, communication or signs of distress. A score of 3.5 would be seen as a relatively positive wellbeing (Laevens and Declercq, 2018). Additionally, qualitative data will be gathered from semi-structured interviews with the teachers to gather their observations and opinions on the effects of the outdoor opportunities provided. These interviews will offer an opportunity to gather a greater depth of information, as stated by ShortCutsTV (2019). However, interviews may lack consistency and credibility as respondents may react to interviewer presence. This may be referred to as the Hawthorne effect, which is further explored within Payne and Payne (2004) who state that information gathered when the researcher is present, may not show a true representation as they may alter their behaviour to how they feel suits the situation. It is also important to caution the Halo effect, whereby prior judgements of the interviewer and their integrity can skew the views of the participant in favour of the perceived positive outcome, and therefore bias the data (Gabrieli, 2021). Additionally, it is important to note that, as stated by Bell and Waters (2018), it is possible that prior experiences can have an influence on thoughts and feelings and as such this could influence the responses given to questions relating to opinion, as well as the delivery of outdoor activities.

This research will also include observations of the children to evidence displays of their wellbeing. Newby (2014) states that observations are an important tool in gathering data where there may be difficulties in communication. It could be argued that observing children will enable triangulation of data from their responses to the questionnaire, the teacher interviews and observations. In opposition to this however, Walker and Solvason (2014) caution observing children, stating that it is important that researchers assess the need and the type of data it is hoped will be gathered from observations and whether this can be achieved in other methods. Furthermore, Walker and Solvason (2014) state the importance of recording such observations and the importance of the researcher recording accurate notes and not skewing these with any personal bias. Moreover, being observed may cause participants to alter their behaviours, which is regarded as the Hawthorne effect, meaning that this can skew information gathered through observations, as discussed in Oswald, Sharratt and Smith (2014) who continue to argue that ethically researchers must inform participants that they are being studied. Oswald, Sharratt and Smith (2014) also explore the importance of building a relationship with the participants in order to mitigate the Hawthorne effect, which may include becoming fully involved in the setting.

Quantitative and qualitative data will be gathered from the participants through pre and post study "professionally administered questionnaires" (Sharma, 2022). The questions will take into consideration Vogl (2004) (who cautions researchers on children's language skills, as previously mentioned) and therefore ask simplified questions, to ascertain their thoughts and feelings in regard to outdoor play and learning. This is also discussed by Sharma (2022) who states that there are 4 steps which need to be followed in order for a respondent to answer questions

posed to them, two of which are the ability to understand what is being asked and being able to communicate the answers necessary. Therefore, closed questioning will be used in order that the data can be quantified (ShortCutsTV, 2019) as well as simply worded questions to ascertain the participants feeling, and to ensure ease of participants' understanding. This can be mitigated by forming relations with the participants prior to interview.

Nevertheless, by using a range of data collection methods, it is hoped that it will be possible to establish triangulation in data. Roberts-Holmes (2018) suggests that triangulation of data, by coming to the same conclusion through many different forms of research, increases the data's credibility, a view supported by Baran and Jones (2016). This is a view also supported by Miles, Huberman, and Saldaña (2013) who state that triangulation allows researchers to resolve any fragility and possible bias evident when only one method of research is used.

This research will not gather information from focus groups. Greene and Hogan (2005) state that a focus group involves conversations with a group of participants to find their views and feelings. Despite the number of advantages to this method, for example allowing participants to feel more comfortable in answering honestly, offering the option to opt out without lost data and the presence of other children and their answers to questions stimulating those who are struggling to participate as well as having a lower cost in comparison to interviews. (Greene and Hogan, 2005). One reason it was decided not to hold focus groups was the influence of other children and the participants becoming distracted by one another, as discussed in Stewart and Shamdasani (2014). This can result in a loss of data as the participants may lose their train of thought or interest easily at such a young age. Moreover, participants may wrongly assess the researcher as being a teacher, therefore they may assume that the researcher is in charge and directing the conversation and with a group of children it can often be difficult to follow the discussion, make notes and allow each child to speak in turn without taking on the managerial role. (Rosalin and Kitzinger, 1998). Furthermore, Greene and Hogan (2005) also discuss the ethical considerations, which could be viewed as constraints to choosing focus groups as a research method, which includes the possibility of disclosures being made in the presence of other children, which is especially feasible as the aim of this study is to assess wellbeing. This is a view which is supported by Vaughn, Schumm and Sinagub (1996) who state that focus groups are inappropriate to explore sensitive topics.

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Ethical considerations.

As a student of UWTSD this research will be governed by the Ethics Committee and the Data Protection Officer (DPO) to ensure compliance (UWTSD, 2022). Unicef (no date) states in Article 12 of the UNCRC that children have a fundamental right to have an opinion on matters which affect them and to have these opinions taken into consideration. As such, many researchers, governments and institutes are turning to children for guidance. However, the importance of doing so ethically is paramount (Anderson and Marrow, 2020).

University of Wales Trinity Saint David (UWTSD) (no date) states that consent must be volunteered and that participants should be provided with all the information necessary about how their data will be used, now and potentially in the future, to make an informed decision. British Educational Research Association (BERA) (2018) states that this research requires that informed consent is obtained from participants, including children. National Society for the Prevention of Cruelty to Children (NSPCC) (2023) states that informed consent ensures that participants are aware of the goals of the research and what they may need to do, that they are volunteers and can withdraw consent and that they know of any risks to them. To aid with informed consent University College London (2023) states that researchers should provide information sheets to participants to invite them to take part and provide an uncomplicated explanation of the reason for the study and the length of time it will take. It should be clear to the participants that it is completely voluntary to participate and they should be aware of confidentiality processes. Additionally UWTSD (no date) states that the information sheet should include information such as how the research is being funded, who has reviewed the ethics of the research, what potential risks there are to the participant and how data will be collected, stored and managed. Furthermore, in the case of children in research, NSPCC (2023) states that researchers should assess the child's level of understanding before gaining consent from them by using a tool called 'Galick Competency'. UWTSD (2022) states that assent can be given by their parents or legal guardians, furthermore, in these circumstances it is beneficial to seek this from both parents where possible. However, BERA (2018) also implores researchers to take into consideration the UNCRC, enabling the child to have a voice and an opinion on matters surrounding them. Therefore, where appropriate the research and its methods should be discussed with the children, in a manner that they can understand so as to enable them to make a choice to be involved, or not, themselves. UWTSD (2022) continues to argue that should the child verbalise their wish not to partake, or display non-verbal communication cues that they are not happy to proceed, then researchers should listen to the participants opinion, over that of the parental assent. This is a view supported by BERA (2018) who states that participants have the right to opt out of research at any time and that participants do not need to give their reasoning behind this. Moreover, should this happen, it is not appropriate to offer any kind of bribe to encourage participants to continue in the research. This is a view also supported in UWTSD (no date). Therefore, should a child tell the researcher, their parents or guardians or staff at the school that they do not wish to continue in the research, this view will be listened to and they will not be required to continue.

Confidentiality and anonymity is vital to ethical research. During the research, participants' names and the setting names will be recorded anonymously, meaning that their identity will not be given or alluded to (UWTSD, 2022). Furthermore, UWTSD (no date) states that by anonymising personal data so that it is not able to be related to a particular person, researchers alleviate ethical concerns around the issue. Ethical Research Involving Children (ERIC) (2019b) states that it is vital that researchers do not break confidentiality by informing families of the participants' data, which can be distressing for the participant. UWTSD (no date) also states that in order to maintain confidentiality it is vital that researchers are storing data securely so that third parties can not retrieve any personal data, for example if paper documents are left on a desk or digital data is left open on a device while the desk is unattended. However, ERIC

(2019b) goes on to state that researchers also have an ethical duty to the participants safety, and as such should the child disclose any risk of harm or abuse, or display any of the common signs of abuse, then confidentiality may be broken to ensure safeguarding measures are followed, which includes informing UWTSD designated DPO (UWTSD, 2022). This is also supported by NSPCC (2023). Furthermore, it is imperative that participants' data is kept confidential at all times and, in regard to storage, researchers must ensure participants' data is safe and secure (BERA, 2018) therefore the information gathered during this research will always be stored securely.

In this regard, UWTSD (2022) further explains that, in order to meet ethical standards, any data gathered from high ethical risk participants, which includes children, requires the researcher to complete the Data Protection Impact Assessment (DPIA) tool, to assess risk while planning the research study and submit this to the university's Research Ethics Committee. Throughout this research paper documentation will be stored in a locked cabinet, digital data will be password protected and, if on a removable device such as a flash drive, these will be stored securely in a locked cabinet (Princeton University, 2023). Furthermore UWTSD (2022) states that only those with those who require the information, for example in case of a disclosure, and states that if sharing data electronically it should be segregated to avoid breaking anonymity.

Children's rights concerning personal data are identical to those of an adult and the child is able to exercise those rights at an age when they are deemed to have a good level of understanding. Therefore, researchers must follow the guidance within General Data Protection Regulation (GDPR) 2018 (NSPCC, 2022). As such, the data collected must be accurate, up to date, for a specific reason and gathered in a way that is clear and secure (UWTSD, 2022). Additionally, the participants may ask to see data related to them at any time (NSPCC, 2022). Moreover, Harcourt, Perry and Weller (2011) state that just as adults receive feedback after participating in research, so should children. This is so that they can hear about what the research has concluded and feel valued. This also forms part of the Data Protection Act 2018, which sets out directives as to how organisations, businesses or governments can use personal information. This also includes the right to have personal information erased, which links to participants being enabled to withdraw at any time as well as the correct procedures that should be followed to erase data when research has come to an end.

ERIC (2019a) states that it is vital that researchers address whether the research is going to produce information which will benefit children and cause no harm to them and continues to say that this can be a very complex process as there are many different factors to be considered.

Risks of harm to the participant:

Stress or anxiety: NSPCC (2023) states that children may feel pressure when they participate in research and as such it is vital that researchers are checking in on their participants wellbeing moving through the research and are mindful that it is the participants right to withdraw from the research at any time and that researchers are approachable and communicate well with the participants.

Disappointment: it is vital that researchers are realistic when talking with participants to gain consent and that information sheets are accurate and not over elaborate with potential findings

so as not to cause the participants to be disappointed or feel an anticlimax to the research. (ERIC, 2019a).

Risks of harm to the researcher:

Wiles (2013) states that a risk to the researcher may include physical risk such as from the participants. This might include aggression or signs of distress at the researcher's presence in their setting. As stated in ERIC (2019a) these risks may be diminished by the researcher being able to form a respectful relationship and communicating clearly with the participant.

Moreover Wiles (2013) further explains that an additional risk to the researcher may be one of emotional distress. As the research topic is one of a wellbeing nature, this may be more prevalent within this research, therefore strategies such as limiting or breaking up time spent gathering data and ensuring there are links with the university support should be employed.

Risk of harm to the University:

Data breach would pose a significant risk to the university, therefore it is vital that all GDPR, data protection, confidentiality and anonymity processes are followed without fail (UWTSD, 2022 and Bell, 2018).

Intentional or unintentional copying of other researchers or writers words, known as plagiarism will result in removal of work (UWTSD, 2022) and therefore will invalidate any research progress. Bell (2018) states that it is vital to acknowledge the work of others in research and writing, this can be achieved by referencing well and using the universities similarity tool.

Word count: 1546