

Nutritional benefits for early years children and how social and economic backgrounds can affect healthy diets.

Abstract

In preparation for the planning of this research project, consideration of the main objectives was firstly explored. This was achieved by exploring the importance of balanced food nutrients in children and how social and economic factors can have an impact on a successful diet. By analysing key research studies, it identifies the essential nutritional components for a healthy diet and looks at the role of interventions and socio-economic status' in shaping children's eating behaviours.

This review also evaluates policy guidelines, from the Curriculum for Wales Foundation Phase Framework (2015), where it emphasises practical food skills and nutritional education. Studies by Bristow et al. (2011) and Oldroyd et al. (2008) highlight differences in dietary outcomes based on socio-economic backgrounds, with lower-income children facing higher risks of poor nutrition. The methodological considerations include qualitative and quantitative approaches, ensuring a comprehensive analysis. Ethical considerations play a crucial role in this research, ensuring that children's rights, safety, and well-being are prioritised. Informed consent is obtained from parents or guardians, which allows for voluntary participation. Confidentiality and anonymity are endorsed through the use of secure data handling, avoiding any potential personal information being exposed in both questionnaire and interview responses. The study recognises the UK Data Protection Act (2018) and the UWTSD Research Ethics and Integrity Code of Practice (2022) to protect participants' privacy. Additionally, children's rights to act independently are respected, with the freedom to withdraw at any time, which complies with Article 13 of the UNCRC (1989). The research follows the British Educational Research Association (BERA, 2024) guidelines, ensuring integrity and ethical responsibility throughout the study.

Literature Review

This literature review has been performed to compile information from research evidence on the benefits of good nutrition in early years children, and how different social factors and interventions can have an influence on diet and health.

The evidence within this literature review was specifically chosen as the sources provided the reader with clear focus of what nutritional factors should be present to determine a healthy diet in children and if interventions or socio-economic differences have an impact on healthy eating. Current policy guidelines and curriculum requirements are also explored to determine ongoing strategies, and future priorities and targets.

The Curriculum for Wales, Foundation Phase Framework (2015) has set out specific requirements for children in early years to follow within the foundation phase framework, which develops their understanding of nutritional values in food, and making it compulsory to develop practical food skills. There is an emphasis for practitioners to educate children to understand the nutritional needs of foods within society and have an in-depth understanding of their nutritional and functional values. (Food and fitness in the curriculum in Wales). A similar approach can be seen in the Bristow et al. (2011) review of Healthy eating in early years settings which notes the publication Healthy Weight, Healthy Lives (Department for education, 2008) emphasising the statutory advice of children within early years settings having access to healthy meals, snacks and drinks when required however it fails to provide clear direction on how this should be approached.

Within the Oldroyd et al. (2008) study, it reports that Reynolds performed research to determine the effectiveness of nutritional interventions at primary school aged children. The purpose of the study was to increase fruit and vegetable intake, and the findings indicated an increased nutritional uptake in pupils subjected to intervention. Similarly, Whitaker et al. (1993) undertook a study comparing classroom interventions relating to nutrition and healthy eating, it concluded that 23% of pupils who had elevated fat intake in their diet previously, following intervention they achieved less than 30% of dietary fats within the daily calorie allowance. Interventions can be seen through communication as Bristow et al (2015) suggests

that there is an undivided understanding that early years environments require independent healthy eating policies, creating a strong connection between practitioners and parents to communicate and promote nutritional and health benefits of dietary intake.

Dietary outcomes based on socio-economic backgrounds are explored in the Oldroyd et al (2008) paper which states within his review that there is increasing evidence to suggest that differential dietary outcomes are affected based upon varying socio-economic status, with the nutritional intake of people in lower social backgrounds eating less fruit, vegetables and fibre rich foods. Diseases that are linked to nutrition and diet are also elevated in comparison to those from more advantaged social and economic backgrounds. When analysing the results from Renolds et al study, it found that there was a higher consumption of fruit and vegetables within higher income families than more disadvantaged backgrounds.

Public Health Nutrition (2015) reported that overall nutrition was found to be inferior in social areas of deprivation and children within these ranges should be prioritised to educate and promote nutrition and healthy eating. This socio-economic gap is also identified in the University of Leeds (2021), 'Tackling childhood food poverty in the UK' paper which highlights the link between poverty and inadequate diet in children. There is a predominance of malnutrition in children that are raised in low income families, and it suggests that having a reduced variety of food types, have an increased probability of lacking in vital micronutrients which are vital to aid growth and development.

Ruxton (1996) reports in her paper that there was a significant gap between lower and higher social class children. Within the lower socio-economic bracket, children's micronutrient consumption was found to be lower, and energy intake via fats was elevated. It was also reported that more breakfast meals were overlooked in lower class children. The data collected clearly identifies that lower class children are unquestionably affected by disparities in meal schedules, breakfast routines and snacks choices in comparison to the higher class segment. Furthermore, findings reported a higher occurrence of coronary heart disease in lower social economic groups. Summarising her results, Ruxton suggests that children living in social and economic disadvantage are vulnerable when considering nutrition.

Methodological Considerations

Coe (2021), regards methodology as the scaffolding of a research plan. Integrating key strategies and principles which define the way in which the research is undertaken. Having clear objectives, having an unbiased approach and applying critical analysis are all crucial to achieving the correct methodological choices. In support of this, Bell (2018), discusses the importance of selecting the appropriate method to collect research data. Influences including time constraints and financial aspects and validity are also a fundamental aspect to consider.

The methodological considerations of this research plan will be based in early years educational settings in Wales. Various methods for this research were explored however some were deemed to be insufficient in providing accurate results for the purpose of the research.

The chosen methods for this research project resulted in the interviewing of children and questionnaires to be completed by the children. Jean Piaget (1952), extensively utilized interview and questionnaire techniques in his research. His interview method involved engaging children in open-ended conversations. By adjusting questions based upon children's responses, provided a flexible and qualitative approach (Campbell, 2015).

Cohen et al. (2018) defines qualitative data analysis by means of the analysis of information, repetition and themes, which can be reliant upon interpretation of the information. When considering qualitative methods that are child friendly focus should be directed towards real life interpretation and experience. Consideration of ethics, age appropriacy and method of research are all important factors within Research with Children, Christensen et al. (2017).

The interviewing method was chosen as it would allow children the opportunity to express their opinions in a free manner, letting them take control of the topic and explaining their thoughts and feelings. Patten (2016) describes how building upon trust in conversation can aid transparency in interview responses.

The use of questionnaires will provide a level of privacy to assure the children can freely express their opinions. This technique however is more structured which can

limit children's responses to questions to compacted answers, for example a 'yes or no' style answer (Graham et al.2013).

Sample sizes

The location and quantity of schools and pupils in this study plan were carefully explored, considering a variety of schools in different areas. Applying a quantitative research method will help to gain measurable data that will improve accuracy and reliability. Choosing larger sample sizes improves generalising data and reduce potential for biases (Neuman, 2014). With this in mind, to achieve transparent and non-biased results across all socioeconomic backgrounds, the Welsh Index of Multiple Deprivation (2019) will be used to select a total of fifteen school across Wales. Five from the lowest scoring educational domains, five schools from the mid-range rankings and five schools from the least deprived areas. Condensing the research into a smaller area of Wales for example within a county could have been undertaken, however although index rankings and sample sizes would have remained the same, the research would not be reflective upon Wales as a country, it would instead record isolated results for one county.

When exploring sample sizes and having considered both qualitative and quantitative research techniques it was decided that for the interview method, two male and two female children will be randomly selected from the attendance register from year one classrooms, having an age range between five and six years of age. The questionnaires would be provided to each child withing the year one class. The option of interviewing and providing questionnaires to practitioners was also considered however these results would have been formed by secondary opinions and had a higher potential of inaccurate data being collected.

Questionnaires were created using Google Forms which is a familiar software used across Welsh schools. There are also environmental advantages by choosing this method, and Google Forms are generally easy to navigate and submit.

Consideration of using the more traditional method was explored as some children may have difficulty with digital skills but support for these children will be available through Welsh Government (2025) digital support strategy which is investing to reduce digital exclusion and support those who require additional digital skills. The

environmental and financial impact will also be far greater using the paper formatted questionnaires. Data can be collected digitally and securely through the software.

There are key areas to identify during the methodological testing, which may have a profound impact on results. Varying ethnic backgrounds may influence a child's diet and food types consumed. Religious beliefs will also determine what and when children can eat. Personal reasons of being vegan or vegetarian will impact upon dietary and nutritional intake. Allergies can also affect the variety of food types available to provide a healthy and nutritious diet. In addition to these factors, the sibship size can affect nutrition in some families. If there are multiple siblings there is a risk of financial pressures to adequately feed the family. The social background is also key to understand the economic status the child sits within. Identifying if a child has parents who work, in contrast to those who are unemployed, or cannot work due to ill health or disability can reflect heavily upon eating habits, nutrition and food options. Another matter to consider would be the children from families sitting within professional working backgrounds. These children sometimes arrive home from school and their parents are in work until late. Leaving them to feed themselves. There are many factors across all social statuses that need to be identified and considered across these methods of research to understand the factors which can affect nutrition in early years children.

There are of course limitations when applying these chosen methods. The Hawthorne effect can cause inaccurate test results. The change in behaviour of a child which could result in the recording information inaccurately or purposely answering questions that are deemed to be a better fit or more socially accepting. Embarrassment of religion or social class can all be factors that will affect overall test results (Islam, 2024).

Triangulation

The use of triangulation in research covers a variety of theorists, methods and sources of data to improve the validity and credibility of the overall research. Exploring a range of sources, strengthens findings through cross-examination from different perspectives (Patton, 2015). Applying a mixed method approach to this research plan will reinforce its validity, explore various theoretical studies and strengthen statistical outcomes which should result in a comprehensive awareness

of the study and mitigate any bias that might be present without triangulation being implemented. This use of triangulation enhances the reliability of research findings and allows for a better understanding. According to Denzin (2012), by integrating qualitative and quantitative data, researchers can capture different dimensions of a subject, leading to richer insights and a more holistic interpretation of results. This multi-faceted approach reduces the limitations associated with a single method, ensuring that conclusions are not solely dependent on one perspective. As a result, this research plan should provide greater depth and improve its theoretical contributions and practical applications to the audience.

Ethical Considerations

Conducting research that involves children requires careful ethical considerations to ensure their safety, well-being, and the rights of the child are prioritised at all times. Ethical guidelines are put in place and form the framework that supports researchers in maintaining integrity, accountability, and transparency throughout the research process (Harcourt et al. 2011). Children can be vulnerable when involved in research so it is crucial to follow strict codes and legal guidelines to prevent any harm and ensure the research remains both credible and ethical. This paper explores the key ethical considerations in research involving the children's participation, including the consideration of codes of conduct, obtaining informed consent, maintaining confidentiality, and complying with data protection laws.

Before conducting the research, it was essential to understand and follow ethical guidelines of research. The University of Wales Trinity Saint David (UWTSD) Research Ethics and Integrity Code of Practice (2022) provides a comprehensive structure for ensuring ethical compliance and protecting both the researcher and participants. Within this code it establishes key principles including honesty, accountability, and respect, which are fundamental factors in conducting ethical research.

The credibility and reputation of both myself running the research and the university are dependent on adhering to these ethical guidelines. The university stipulates that researchers must submit their applications for ethical approval before undertaking any research activities involving children. By following these ethical protocols, the

researcher shows their commitment to the conducting of responsible research whilst always ensuring safeguarding of the children from potential risks.

One of the fundamental ethical requirements in research is obtaining informed consent in the case of children, from their parents or legal guardians. Nichols et al. (2023) explains that any research involving children requires an additional level of care to ensure that parents fully understand the purpose, methodologies and any potential risks associated with the study.

For this study on healthy eating and the effects of socio-economic factors, consent letters will be distributed to the families of Year One children across the selected schools. These letters will provide a clear explanation of the research aims, detailing the two methods of data collection: questionnaires and interviews. The letters will outline that all children in the class will have the opportunity to participate in the questionnaire, while a smaller group of four children made up of two boys and two girls will be randomly selected for interviews.

Parents or guardians will be given the option to provide consent for their child's participation in both the questionnaire and interview or to opt out of one or both components. Ethical research involving children (2024) emphasises the importance of informed consent from young people and their parents stating that it is important to remember that the consent is not a one-time process but an ongoing agreement that can be changed at any time. During this research, if any children who initially have agreed to participate, may later change their mind and they feel uncomfortable or overwhelmed at any stage during the process, they should feel comfortable to withdraw. Researchers must respect this decision and ensure that children are never coerced or pressured into participation.

Ethical research must also align with children's rights as outlined in the United Nations Convention on the Rights of the Child (UNCRC, 1989). Article 13 of the UNCRC states that all children have the fundamental right to freedom of expression, which includes their right to choose whether they wish to participate in research. While parental consent is required for ethical and legal reasons, the child's autonomy must also be respected throughout the study.

Children should be given age-appropriate explanations about the study, and their verbal or non-verbal cues must be carefully observed at all times. If a child appears

hesitant or unwilling to continue, researchers must immediately acknowledge their concerns and allow them to withdraw. Reed (2013), highlights the attributes of successful research with young children requires the researcher to ensure a reassuring and comforting environment in which they feel safe to participate and share their thoughts and opinions without judgement (Walker, 2014). By prioritising the child's rights and emotional well-being, researchers ensure a more ethical and respectful approach to conducting studies involving minors.

Maintaining the privacy and confidentiality of research participants is also a priority, particularly when working with children. The University of Liverpool (2023) emphasises the importance of protecting personal data and adhering to strict confidentiality measures when handling sensitive information. Ensuring anonymity and confidentiality in research involving children is paramount to safeguarding their identity and personal details.

To mitigate any risks associated with data privacy, the research design will ensure that questionnaires do not require any personally identifiable information.

Additionally, the interview process will involve only audio recordings rather than video recordings, further ensuring the anonymity of participants. Prior to starting the interview, children will be reminded not to disclose personal details such as their name or home address. This precaution helps prevent unintentional breaches of confidentiality.

The General Data Protection Regulation (GDPR) and the UK Data Protection Act (2018) provide clear legal requirements for handling personal data. GDPR states that all data processing must be lawful, transparent, and necessary for the intended research purpose. Additionally, all data collected must be accurate, secure, and handled with integrity.

To comply with these legal standards, researchers must establish clear procedures for data collection, storage, and disposal. Data obtained from the study will be stored securely, and access will be restricted to authorized personnel only. Furthermore, data retention policies will be in place to ensure that all research-related data is disposed of responsibly once the study concludes.

Ethical research also requires fairness and equity in data collection and analysis.

Bias must be minimized at all stages of the research process to ensure reliable and

valid results. The British Educational Research Association (BERA, 2024) outlines ethical guidelines emphasizing the importance of objectivity, fairness, and transparency in educational research.

For this study, the questionnaire and interview process will be designed to ensure that all children have an equal opportunity to express their views. The selection of interview participants will be random, ensuring that no child is unfairly excluded or included based on external factors. Additionally, when analysing data, researchers must remain objective, presenting findings accurately and without any distortion. Ethical responsibility extends to how results are reported ensuring that conclusions drawn from the study are honest and well-founded.

Despite careful planning, ethical challenges may arise during research involving children. One potential issue is the emotional impact of discussing socio-economic factors and healthy eating habits. Some children may come from disadvantaged backgrounds where food insecurity is a concern, and discussing these topics could raise feelings of discomfort or distress.

To mitigate this risk, the research will be conducted in a sensitive manner, using neutral and non-judgmental age appropriate language. Researchers must be prepared to provide support if a child becomes upset, including offering them the option to stop the interview or speak to a trusted adult. Additionally, teachers and school staff will be informed about the research process so they can provide emotional support to students if needed.

Another ethical challenge involves ensuring that children understand the questions being asked. Since Year One students are still developing their comprehension and communication skills, the language used in questionnaires and interviews must be relevant to their ability and easily understandable. Researchers will also need to be patient and give children time to process and respond to questions at their own pace.

Ethical considerations are fundamental in research involving children, requiring strict adherence to institutional guidelines, legal frameworks, and best practices. By following the UWTSD Research Ethics and Integrity Code of Practice (2022), researchers ensure accountability and credibility while protecting participants. Obtaining informed consent, maintaining confidentiality, complying with GDPR, and respecting children's rights are all essential components of ethical research.

By prioritising the ethical integrity, researchers not only uphold professional standards but also create a research environment that will be safe, inclusive, and respectful for all children. Through careful planning, transparency, and sensitivity, ethical challenges can be effectively managed, ensuring the research is both valuable and responsible.

In conclusion, this research has been proposed to identify the differences in healthy diet and social factors. The decision of integrating qualitative and quantitative methods into this study will hopefully provide an understanding of how socio-economic status can affect food choices and nutrition in young children. The importance of ethical considerations, including the use of informed consent, confidentiality, and compliance with legal frameworks, will ensure that my research proposal will follow the highest possible standards of integrity and protection to the children. By using triangulation, I am hoping that the study will enhance the reliability of its findings, offering valuable information. Ultimately, this research proposal will contribute to a greater understanding of childhood nutrition, highlighting the need for inclusive and effective dietary education in early years settings.

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