

Research Proposal Form

MSc Public Health and Social Care in Practice Dissertation (CHS7004)

Fill in this form after discussions with your tutor.

The information will be formally submitted to your supervisor for approval.

Student Name	Student ID
Saleha Juned Gugarman	2236803

**Please adapt the text boxes accordingly*

Proposed Research Topic:

Assess the most common risk factors for pneumonia-related mortality in under-5 children in UK.

Research question:

What are the common risk factors for pneumonia-related mortality and What is the role of vaccination programs in preventing pneumonia and reducing mortality rates in under-5 children in the UK?

Research methodology:

- **Research design:** In this research systematic review will be employed.

Identifying relevant 10 studies through comprehensive literature searches in databases like PubMed, MEDLINE, Ebsco and any other official website of medical records.

- **Inclusion criteria:**

- 1- All study types that provide information on pneumonia risk factors.
- 2- Under 5 children in the UK as target population.

- **Exclusion criteria:**

- 1- Studies not conducted in the UK.
- 2- Studies with a focus on adults or outside the specified age range.
- 3- studies not reporting relevant data on pneumonia risk factors.

Data collection: Develop a structured data collection form to systematically collect relevant information from the selected scholarly existing studies.

- This includes key terms like risk factors for pneumonia, under-5 children, and key findings, UK.

Data sources: Secondary data: Utilizing existing data sources such as national health databases, PubMed, and other relevant sources to gather relevant information on pneumonia mortality, risk factors, healthcare access, and treatment outcomes.

Data analysis technique: By using **Thematic analysis** method to identify common risk factors.

- Summarize and synthesize the findings of the included studies.

- By coding and identifying themes, patterns and current topics across different studies, review and refine themes and data synthesis will be employed for analysing the data from the studies.

A brief overview (14-20 sentences, including 5 references)

Please provide a **brief overview** of the topic you intend to research in a lay public language, that is for a non-scientific audience:

- Pneumonia is an illness that affects the tiny air sacs in the lungs, known as alveoli. These air sacs are crucial for exchanging oxygen and carbon dioxide during breathing. When someone has pneumonia, these air sacs become infected or inflamed, making it harder for them to function properly (WHO, 2022).
- It's caused by different things like bacteria (such as *Streptococcus pneumoniae* and *Haemophilus influenzae* type b), viruses, fungi, and sometimes parasites (WHO, 2022).
- This study examines the risk factors like **access to healthcare services, socioeconomic conditions, nutrition, vaccination coverage, environmental factors, and healthcare infrastructure**, which are responsible for pneumonia-related child mortality rates in the UK by following PRISMA guidelines.
- Common symptoms of pneumonia include cough, difficulty breathing, chest pain, and fever. The severity of pneumonia can range from mild to severe, and treatment often involves medications, such as antibiotics for bacterial infections, antivirals for viral infections, and antifungals for fungal infections. Seeking prompt medical attention is important for an accurate diagnosis and appropriate treatment (WHO, 2022).
- Pneumonia is a serious illness for kids under 5 years old and is a leading cause of death.
- About 15% of all child deaths are due to pneumonia, and a specific problem called hypoxemia (low oxygen levels in the body) is also linked to these deaths (Rahman et al., 2022).
- In rich countries, like the UK, pneumonia cases in kids are lower, with 2.3 cases per 10,000 children.
- A small percentage (0.2-2.8%) of these children may need to go to the hospital because of pneumonia (Haggie et al., 2021).
- A study at a hospital in the UK found various things causing pneumonia, like bacteria and viruses, including one called enterovirus (Drummond et al., 2000).
- In the UK, a vaccine called PCV7 was first given to kids in 2006 to protect against pneumonia.
- Later, in 2010, a better version called PCV13 replaced it for even stronger protection (Lau et al., 2015; Saxena et al., 2015).
- Between 2007 and 2012, around 9,537 kids under 5 years old had to go to the hospital in England because doctors suspected they had pneumonia (Reeves et al., 2017).

Rationale:

- This research seeks to explore the risk factors for pneumonia in under-5 children for improving the child health outcomes, reduce global health disparities, and promoting evidence-based policies and interventions that can save young lives in both hospitals.
- **Prevalence:**
- In high-income countries 1/66 children developed pneumonia in year compared to low-income countries (Le Roux and Zar, 2017). For an example, in the UK, 473/100,000 children developed pneumonia in between 2004-2012 (**British Lung Foundation, 2012**).
- Also, in the England and Wales, 700 cases reported of pneumonia every year and claimed 40 deaths among under-5 children (NHS GOSH, 2020).
- In the UK, from one study conducted in 13 hospitals, shows that 33.8 (95% CI 31.1-36.7) children diagnosed with community-acquired pneumonia and 28.7 (95% CI 26.2-31.4) children admitted in hospitals, whom age was <5 years and risk of major pneumonia was increased in under-5 children (OR 1.50, 95% CI 1.07-2.11) (Clark et al., 2007).
- Moreover, in the UK, from Broad brush calculations suggestion, the funded cost for pneumonia in the **NHS was £6-8 million** annually (Farha and Thomson, 2005).
- **Global health disparities:** According to UNICEF (2022), more than 700,000 under-5 children died because of pneumonia every year, and 2000 per day. So, understanding the factors that contributes pneumonia mortality in both hospital is beneficial for addressing global health disparities.
- **Resource allocation:** High-income countries like the UK have more resources and advanced healthcare systems, yet pneumonia still affects children (Koshy et al., 2010). This research can help optimize resource allocation and healthcare strategies by highlighting any unexpected risk factors that may be specific to this country.
- **Policy implications:** The findings of this research will have practical policy implications. It can inform policymakers in the UK on the specific interventions needed to reduce pneumonia mortality.
- **Preventive measures:** Assessing the risk factors can guide preventive measures such as vaccination programs, nutrition interventions and enough breastfeeding. For an example, management guidelines for pneumonia for children foe early detection and effective treatment published by the British Thoracic Society (Harris et al., 2011).
- **Research generalizability:** The insights gained from comparing two different hospitals can potentially be applied to other hospitals facing similar health challenges. It set a precedent for comparisons and research collaborations to address common global health issues.

Implications of study:

- 1) To give knowledge to policymakers to implement any new health policy.
- 2) Guide future researchers to address gaps.
- 3) Increase awareness by child health education programs and preventive measures.
- 4) Reduce pneumonia-related child-mortality in the UK.

Aim (a broad statement capturing the overall purpose of this research)

Please provide the aim of the topic you intend to research:

- **The domain aim of this research is to comprehensively assess and synthesize the existing evidence to identify the risk factors, are responsible for the high mortality rate of pneumonia in children under the age of 5 in the UK.**

Objectives (outline 3-5 using bullet points)

Please provide the objectives of the intended research:

- To systematically identify, compare and analyse the risk factors responsible for the high mortality rate of pneumonia in under-5 children in the UK.
- To evaluate the impact of healthcare access, including vaccination coverage and timely medical care, on pneumonia mortality in the UK.
- To assess the effectiveness of treatment strategies and to determine the role of vaccination programs in preventing pneumonia and reducing mortality rates in children under 5 in the UK.
- To explore how socio-economic, cultural, and environmental factors impact the adherence to treatment regimens in the UK.

Ethical considerations (indicate ethical issues that are relevant to your research)

*Collecting primary data from human participants requires you to address these issues.
Using primary data sources still requires how you will address these issues.*



I will submit my research proposal and the UWTSD ethics form to my supervisor to receive ethical approval.	Yes
I will develop a research information letter and consent form to be handed to each participant.	N/A
Voluntary informed Consent will be asked of each participant:	N/A
I will ensure participants will not be subjected to coercion, intimidation, and undue influence to participate in this research.	N/A
I will ensure participants will be informed they have the right to withdraw and their data from this research.	N/A
I will ensure to store the obtained signed consent forms securely and anonymously.	N/A
I will ensure the collected data will be protected and stored securely and deleted after ending this study program.	Yes
I confirm that I have discussed and agreed every section of this form with my supervisor and will only conduct my research in line with what has been agreed in this document	Yes
Signature..... 	Date:.....03/01/2024.....
<u>Supervisor:</u>	
Signature.....	Date:.....
<u>Appendix:</u>	
A Participant research information form	
B Consent form	
C List of Questions / Interview schedule	

Reference List add here below

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