

# Chapter 4

## Experiments

### 4.1 Literature Search and coding for UK NHS and CHS Challenges

#### **Experiment 1**

##### **Prompt:**

*I am conducting a thorough exploration of academic literature on Web of Science to identify the most pressing (biggest) challenges/issues in UK National Health Service, especially within Community Health Services. Generate a Boolean search string based on the provided information.*

Figure (1) – The initial prompt used to create a Boolean search string for NHS and CHS Challenges

##### **Output from LLM:**

*"National Health Service" OR NHS AND "community health services" OR "primary care" OR "community healthcare" OR "district nursing" OR "home healthcare" OR "community-based care" AND challenge\* OR issue\* OR problem\* OR barrier\* OR "pressing need\*" OR "key concern\*" OR "systemic issue\*" OR "service gap\*" OR "major concern\*" OR "critical issue\*" AND "United Kingdom" OR UK OR Britain OR "British healthcare"*

Figure (2) – AI generated Boolean search string

#### **Experiment 2**

##### **Prompt:**

*Now use parentheses to refine the search results.*

Figure (3) – The refined prompt used to generate a Boolean search string

##### **Output from LLM:**

*("National Health Service" OR NHS) AND ("community health services" OR "primary care" OR "community nursing" OR "district nursing" OR "home healthcare" OR "community-based care") AND ("workforce shortage" OR "staff shortage" OR burnout OR "staff wellbeing" OR "mental health" OR "health inequalities") AND ("United Kingdom" OR UK OR Britain OR "British healthcare")*

Figure (4) – The refined AI generated Boolean search string

### **Experiment 3**

*("National Health Service" OR NHS OR "community health services" OR "primary care" OR "community healthcare" OR "district nursing" OR "home healthcare" OR "community-based care") AND ("systemic issue" OR "Poor Interoperability" OR "Fragmented Care" OR "Resource Misalignment" OR "Policy Misalignment" OR "Workforce Shortages" OR "Regional Health Inequalities" OR "Insufficient investment in training new staff" OR "Inadequate workforce planning" OR "Lack of government accountability" OR "Excessive workloads" OR "Poor NHS administration" OR "International Reliance" OR "Declining staff wellbeing" OR "Burnout") AND ("United Kingdom" OR UK OR Britain OR "British healthcare")*

Figure (5) – The manually refined AI generated Boolean search string