**IS4250 Group 3**

**Report Outline**

1. **Introduction of the topic**
2. **(experiment) Selection/sampling process + Statistical analysis**
3. **Contribution that the paper makes to the field of health**
4. **Strengths**
5. **Issues, challenges, limitations**
6. **Conclusion**
7. **Introduction**

* Discrete Choice Experiment (DCE)
* Audits to judge quality and safety in health care (clinical audits)

1. **The Experiment**
2. Attributes selection process

* This process was to simplify the choices given to respondents in the actual data gathering process later.
* 51 indicators for schizophrenia treatment were assessed in 33 mental hospitals. These indicators are grouped in 10 clusters based on content association.
* What was assessed? Operational level of each indicator in the hospital:
  + 0 - no policy is present
  + 1 - policy is present, all employees are aware of the policy
  + 2 - policy is fully applied
  + 3 - effects of policy is periodically evaluated
* Subject: 14 inspectors and 4 co-inspectors from Dutch Healthcare Inspectorate who did the usual audit and inspection in the hospitals.
* First assessment - logistic regression analysis :
  + Dependent variable = whether sufficient care in the attended hospitals was present
  + Independent variable = sum score of each indicators’ operational level per cluster
  + Result = 7 most important clusters
* Second assessment:
  + Each inspectors and co-inspectors selected 3 most and 3 least important clusters from the result of first assessment.
  + Result = 6 most important clusters

\*Assumptions of the first assessment:

* All inspectors had a consensus for each hospital, so the data is not from each individual inspector (eg. for hospital A, all inspectors discussed together whether there is sufficient care)
* One graph for one cluster (y axis: whether there is sufficient care, x axis: the sums score of the cluster)
* Each dot is one hospital data (one set of: whether there is sufficient care & the sum score of that cluster)

1. Statistical analysis of the actual experiment

* The result from attribute selection process (6 most important clusters) was used as the attributes for this actual data gathering process.
* Choice-set:
  + Comparison of hospital A and B regarding 6 attributes.
  + Operational level for each attribute: 1) present; or 2) not present
  + Hospital A has 3 attributes with operational level present and 3 without. Hospital B complements hospital A’s scenario (opposite scenario from hospital A).
* Subject: 33 employees from Dutch Healthcare Inspectorate. But only 25 responded to the request of filling in the survey.
* Assessment: Using web-based questionnaire consisting of 10 choice-sets, subject to choose which hospital provides better quality care based on solely the attributes’ operational level. No respondent received the same order of choice-sets.
* Logistic regression analysis:
  + Dependent variable: choice of hospital
  + Independent variable: operational level in each attribute (-1 if not present, 1 if present)
* Resulted rank (sorted by most important):
  + Operational elaborate plan
  + Care Program
  + Measurement of treatment outcomes
  + Involvement of patients and relatives in the treatment
  + Pharmacotherapy and governance responsibility (both are less important)

1. **Contributions to the Field of Health**

* The result shows that it is possible to use a limited number instead of a large set of indicators in an assessment or audit process of mental healthcare service quality.
* The result might contribute to the development of uniform and consistent guidelines for inspections performed by regulatory agencies.
* This information might be useful to enhance the transparency and efficiency of the quality assessment process for both regulatory agencies and hospitals.

1. **Strengths of this Study**

* The selection of respondents consisted of the entire population of inspectors in Netherlands who are involved in the regulation of institutes providing care to patients with schizophrenia. In total 33 persons were invited to participate in the discrete choice experiment. Although 8 persons did not respond, their characteristics did not differ from those respondents who participated in the DCE.
* The attributes were carefully selected from general accepted guidelines and a survey among employees of the Healthcare Inspectorate. In this way the amount of attributes was limited in a well-considered way.
* The DCE was tested with a pilot study among employees who were supervising the process of inspection.
* The selection of attributes, levels, and the amount of scenarios is a process of weighing a sound methodology against the cognitive burden and complexity for the respondent -> more reliable

1. **Issues, challenges**

* Small sample size (33, and 8 did not respond) (Counter argument: Although 8 persons did not respond, their characteristics did not differ from those respondents who participated in the DCE.)
* Only in Netherland and only for Schizophrenia care (Counter argument: Their DCE was restricted to the regulation of mental health care, in particular the quality of care for patients with schizophrenia and drug dependency. However, this method is also applicable to all the other fields of health care from a regulation point of view. Besides, they believe the DCE method can be generally applied in governance and management of health care.)
* No prior estimates of the utility related to the attributes → unsure if the experiment design is optimal
* In attributes selection, there were 4 levels of operational level. But, in the actual DCE, there were only 2 levels.

1. **Conclusions**

* In the development of quality indicators, more parties should be involved such as the patients themselves, their family and the caregivers.
* The development of quality indicators for healthcare needs an international approach
* It is possible to use a limited number instead of a large set of indicators in an assessment or audit process
* DCE is informative and can help healthcare regulating agencies to identify the most important indicators.
* Results from DCEs, performed on organizational and regulatory levels, can contribute to the development of quality indicators with joint interests for both management of psychiatric institutes and regulatory agencies.