

KNOWLEDGE AND PRACTICE OF PULMONARY TUBERCULOSIS : HEALTH CARE WORKERS IN PUBLIC HOSPITAL, SELANGOR

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KNOWLEDGE & PRACTICE OF PULMONARY TUBERCULOSIS: HEALTH CARE WORKERS IN PUBLIC HOSPITAL, SELANGOR

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OUTLINE OF PRESENTATION

- ▶ Title
- ▶ Background
- ▶ Methods
- ▶ Results & Discussion
- ▶ Limitation
- ▶ Implications & Recommendations
- ▶ Conclusion
- ▶ References
- ▶ Acknowledgments

BACKGROUND

- Pulmonary Tuberculosis (PTB) is highly widespread and ranking as the most communicable disease killer worldwide (Demissie Gizaw et al., 2015)
- PTB can be transmitted via airborne particles called droplet nuclei (MOH, 2013)
- **25,739** TB cases reported in Malaysia (2016) and becomes the second largest cause of death in government hospitals (MOH, 2018)

- The increase number of TB cases in Malaysia will also increase the risk of our HCWs getting infected with TB when treating them
- Based on data obtained from Ministry of Health (2016), number of staffs infected with PTB in one of the public hospitals in Selangor during 2016 increases 3 times the total staffs infected with PTB in 2014 & 2015
- Therefore, we decide to study on the knowledge & practice of PTB among HCW in Medical Department of one of the public hospital

OBJECTIVES

MAIN OBJECTIVE

- To assess TB Infection Control (TBIC) knowledge and practice among HCW (nurses and doctors) in Medical Department in a public hospital

SPECIFIC OBJECTIVES

- To measure the level of TBIC knowledge among Medical Department nurses and doctors
- To measure the level of TBIC practice among Medical Department nurses and doctors
- To determine association between socio-demographics and TBIC knowledge and practice

METHODOLOGY

STUDY SETTING

Medical wards & Medical clinic in a public hospital

STUDY DESIGN

- A cross-sectional quantitative study

POPULATION

- Nurses and doctors in Medical Department (wards & clinic)

N= 538 (341 nurses & 197 doctors)

SAMPLING

- **SAMPLE SIZE**

(Calculated using raosoft sample size)

Sample size calculated (n) = 225

Added drop out 20% (n), TOTAL SAMPLE SIZE = 271

167 nurses in Medical Department

104 doctors in Medical Department

- **SAMPLING**

Types of sampling – Stratified Random Sampling

RESEARCH INSTRUMENT

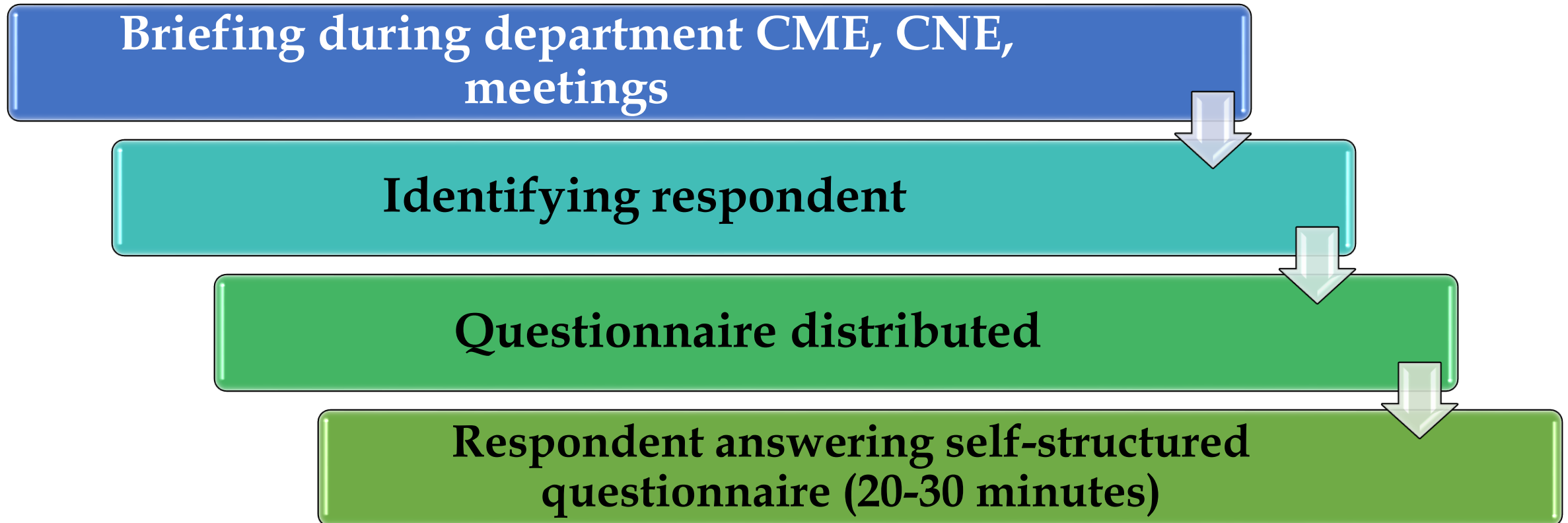
Self Structured Questionnaire (3 point Likert Scale)

- 36 Questions
- Socio-demographic – 6 Items
- Knowledge on TBIC Measures – 19 Items
- Practice on TBIC Measures – 11 Items
- **Questionnaire:** Adopted from Anuar et al. (2017)
KNOWLEDGE AND PRACTICE ON TUBERCULOSIS INFECTION
CONTROL MEASURES AMONG NURSES IN PUBLIC HOSPITAL IN
SELANGOR
- **Content Validity:** Head of Department of Medical Department
& a senior Clinical Nurse

• **PILOT STUDY**

- 30 respondents (10% sample size)
- Reliability Test - Cronbach's Alpha – 0.76

• **DATA COLLECTION**



ETHICAL CONSIDERATION

- Ethical approval by NMRR (ID: NMRR-18-2147-41787)
- Approval from
 - ❑ Hospital Director through CRC
 - ❑ Head of Department, Medical Department

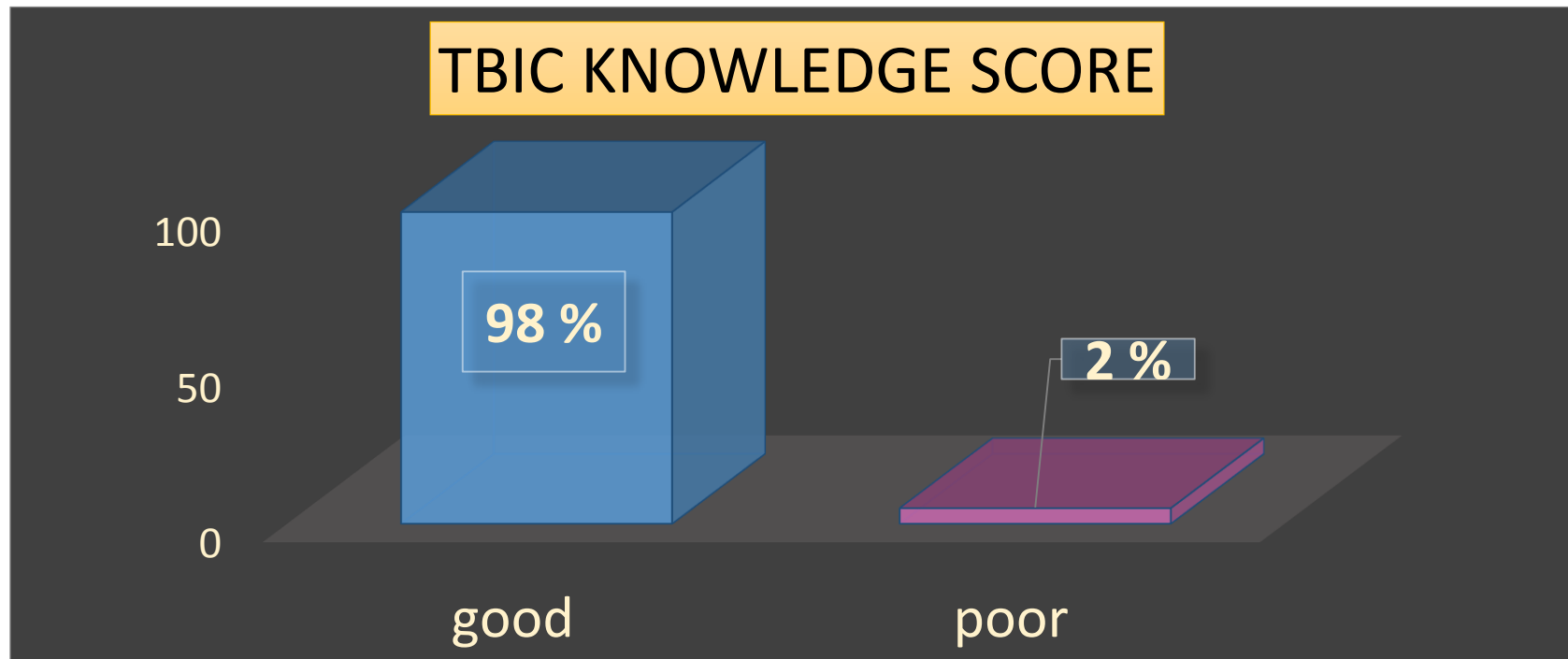
• DATA ANALYSIS

- Data analyze using SPSS (version 20)
- Descriptive analysis
 - Frequency and percentage
- Inferential data analysis
 - One way ANOVA & Independent T-Test

RESULTS & DISCUSSION

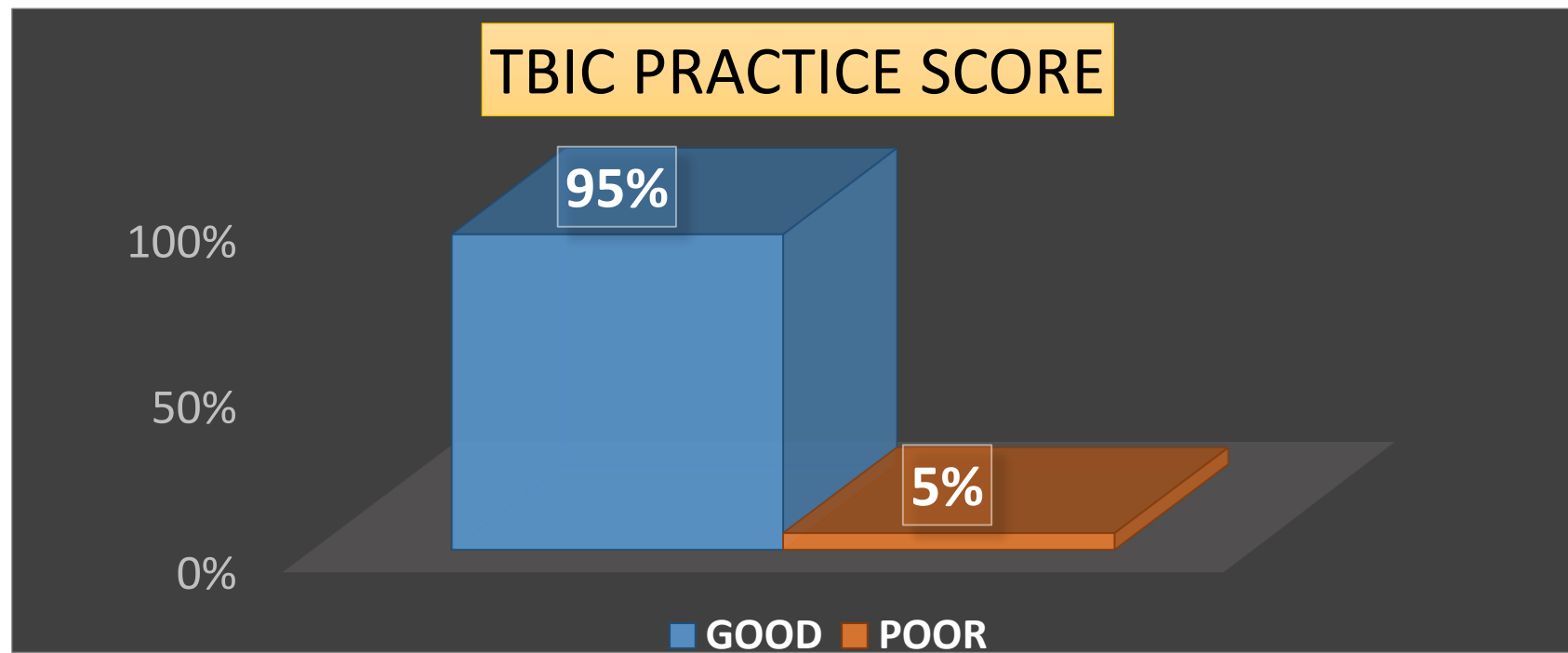
SOCIO DEMOGRAPHIC CHARACTERISTICS OF THE STUDY POPULATION

Variable	Characteristics	Frequency (N=248)	%
EDUCATION	Diploma	155	62.5
	Post Basic	12	4.8
	Degree	81	32.7
YEAR OF SERVICE	< 1 year	56	22.6
	1-3 years	111	44.8
	3-5 years	32	12.9
	5-10 years	27	10.9
	10-14 years	10	4
	> 15 years	12	4.8
HAVE ATTENDED PTB PATIENTS	Yes	230	92.7
	No	18	7.3



DISCUSSION

- This knowledge scoring in this study was higher than some of the study done by Luksamijarulkul et al. (2004) in Bangkok (85%), Ghabrah et al. (2003) in Saudi Arabia (81.8%) and Temesgen & Demissie (2014) in Euthopia (74.4%)
- Variations in the rates of “good” knowledge across countries could be attributed to the different settings and methodologies used by different studies



DISCUSSION

- The TBIC score on practice was still higher compared to some of the study done by Hashim et al. (2003) in Iraq (90.2%), Temesgen & Demissie (2014) in Euthopia (63.3%) and Bhebhe et al. (2014) in South Africa that is (10.9%) only
- The discrepancy might due to the differences in setting area

ASSOCIATION BETWEEN KNOWLEDGE vs EDUCATION

The knowledge on TBIC were significantly associated between the respondents with Degree and Diploma qualification ($p=0.003$ /CI 0.26-1.58)

DISCUSSION

- This finding is similar with the study by Demissie Gizaw et al. (2015) in Ethiopia (AOR=1.49, 95% CI: 1.47,2.19) but contradict with the result from Anuar et al. (2017) in Malaysia ($p=0.259$)

ASSOCIATION BETWEEN KNOWLEDGE vs CARING FOR PTB PATIENTS

The study finding were significantly association between the respondents with good knowledge on TBIC and experience of caring for PTB patients ($p=0.016$, 95% CI 0.23-2.17)

DISCUSSION

- This study finding is similar with the study by Anuar et al. (2017) in Malaysia ($p=0.021$)
- Therefore, respondents with experience in managing PTB patients have good knowledge on TBIC

LIMITATION

- Some respondents might give the answers that they thought the researcher was looking for
- Thus was not their true response (social desire bias)
- In future, observational study may produce better accurate results than asking about practices in a questionnaire

IMPLICATIONS & RECOMMENDATION

NURSES & DOCTORS

- Nurses & doctors need to be knowledgeable in order to apply good practice in handling PTB patients. So they are encouraged to attend workshop on TBIC
- Therefore, with good knowledge, they can reduce the risk of infected by PTB while taking care of PTB patients

PATIENTS

- With good knowledge, nurses & doctors are able to provide a better quality of treatment and good health education to patient and relatives
- Therefore patients and relatives will be satisfied with the care given

IMPLICATIONS & RECOMMENDATION

ORGANIZATION

- Awareness to all HCWs in management of PTB patients
- To conduct training for those nurses & doctors who are not expose to PTB patients
- To have a proper patient isolation (environment & setting) to manage PTB patients

CONCLUSION

- The level of knowledge and practices on TBIC among HCW were relatively good (98% & 95%)
- However, there were some participants with good knowledge but poor in their practices (2.8%)
- Respondents with an experience caring for PTB patients and higher qualification were found to be more knowledgeable on TBIC
- Therefore, in a nutshell, it is essential to expose doctors and nurses in using their knowledge and experience to strengthen their practices in caring for PTB patients.

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THANK YOU