

EXPLORING KNOWLEDGE AND PERCEPTIONS OF ANTIBIOTIC RESISTANCE AMONG COMMUNITY RESIDENTS: PENANG STATE, MALAYSIA



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INTRODUCTION

- Public awareness of antibiotic resistance (ABR) is low all over the world.
- Understanding community perspectives of ABR is essential for designing effective community-based interventions to combat this major public health problem.

OBJECTIVE

- To explore the knowledge and perceptions of ABR among community residents in Jelutong District, Penang, Malaysia.

METHODS

- **Study design:** A qualitative approach was employed to gain a deeper understanding of the residents' knowledge and perceptions of ABR.
- **Study setting:** This study was conducted at 1Malaysia Community in Makloom Street, Jelutong between 11th October 2014 and 8th November 2014.
- **Sampling and sample size:** A purposive sample of the residents (aged ≥18 years) were interviewed with the aid of a semi-structured interview guide until data saturation was achieved.
- **Data analysis:** All of the interviews were audio recorded, transcribed verbatim and analysed thematically.
- **Ethical approval:** This study was approved by the Joint Ethics Committee of School of Pharmaceutical Sciences, Universiti Sains Malaysia—Lam Wah Ee Hospital on Clinical Studies (USM–HLWE/IEC/2014 (0010)).



Lyna Irawati interviewing a community resident about his knowledge and perceptions of antibiotic resistance.

RESULTS

- A total of twenty-two participants (P1–P22) aged between 21 and 70 years (mean = 48 years) were interviewed.
- The participants were from different gender, ethnic, educational and socio-economic backgrounds.
- Six major themes were identified.

Theme 1: Understanding the term 'ABR'

- The majority of the participants had heard of the term 'ABR', but only two had the correct understanding of this term—that is, germs become resistant to antibiotics:

'In my opinion, antibiotic resistance is a condition where germs are able to resist the effects of antibiotics.' (P1)

- Most participants had misconceptions about ABR, believing that the body becomes used to antibiotics:

'Antibiotic resistance is a condition where the body becomes used to antibiotics.' (P6)

Theme 2: Sources of information about ABR

- More than half of the participants had read about ABR in newspapers:

'Antibiotic resistance was reported in the local newspaper. That's how I got to know about it.' (P20)

- Some participants had heard of ABR from family or friends:

'I heard about [antibiotic] resistance from my dad and my good friend.' (P6)

Theme 3: Knowledge of the causes of ABR

- Most participants expressed some uncertainty about the causes of ABR:

'I don't really know the root of antibiotic resistance.' (P22)

- Some participants stated that over-prescribing of antibiotics can lead to ABR:

'In my opinion, unnecessary prescription of antibiotics can result in antibiotic resistance.' (P11)

Theme 4: Knowledge of the consequences of ABR

- Most participants were unaware of the consequences of ABR. Moreover, they were not concerned about it:

'I don't know the consequences of antibiotic resistance. Anyway, it doesn't concern me at all!' (P10)

Theme 5: Perceptions of the responsibility to combat ABR

- The majority of the participants believed that doctors play a major role in combatting ABR:

'Apart from being trained in medical science, doctors are also qualified to prescribe antibiotics. Hence, they are responsible for combatting antibiotic resistance.' (P5)

- Only a few participants perceived themselves as being responsible for preventing ABR:

'I guess all patients, including myself, are responsible for preventing [antibiotic] resistance.' (P18)

Theme 6: Knowledge of the prevention of ABR

- Most participants were unaware of the strategies for preventing ABR. Moreover, they believed that they had a limited role in preventing it:

'I'm just an ordinary person. I'm not sure how to prevent [antibiotic] resistance. I guess there is nothing I can do about it.' (P16)

- Only a few participants understood that the responsible use of antibiotics such as adherence to antibiotic therapy can prevent ABR:

'I think taking antibiotics exactly as your doctor tells you can prevent antibiotic resistance.' (P15)

DISCUSSION

- The majority of the participants had heard of the term 'ABR', but most of them understood it as the body becoming used to antibiotics.
- Most participants were unaware of the causes and consequences of ABR, as well as the strategies for preventing it.

CONCLUSIONS

- The community residents held misconceptions and had negative perceptions of ABR.
- The study identified areas that should be focused on when designing educational interventions to combat ABR at the community level in Malaysia.

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REFERENCES

- McCullough A, Parekh S, Rathbone J, Del Mar C, Hoffmann T. A systematic review of the public's knowledge and beliefs about antibiotic resistance. *J Antimicrob Chemother.* 2016;71(1):27-33.
- World Health Organisation. Worldwide country situation analysis: response to antimicrobial resistance. Geneva 2015.

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