An Evaluation of the Knowledge and Practices of Metro Vancouver Residents Regarding Mould

A BCIT Applied Research Project by Chloe LeTourneau
Overview

● PURPOSE
● RATIONALE
● LITERATURE REVIEW
● METHOD
● RESULTS
● DISCUSSION
● CONCLUSION
Purpose:

To evaluate the knowledge, attitudes and practices of Metro Vancouver residents regarding mould as it relates to Indoor Air Quality.
Rationale:

Public and Environmental Health professionals will be better able to address concerns from the public regarding mould when they have a better understanding of the public perception on the topic.
Key Literature Review Findings
1 Mould is EVERYWHERE
2 Contributing factors include moisture, a nutrient source, and others.

3 Indoor environments can easily become a part of the problem.
4 Health effects are varied

5 Preventing an accumulation of moisture is critical to preventing the mould growth
6 Remediation depends on the extent of the problem

7 Reliable resources are available to the public but may be difficult to access
Method
● Self-administered online questionnaire
● Open to Metro Vancouver residents
● Disseminated using email, social media and the snowball effect
Questionnaire Details

● SECTION 1: DEMOGRAPHICS, INCLUDING:
  ○ Age
  ○ Housing status
  ○ Highest education achieved

● SECTION 2: KNOWLEDGE AND ATTITUDES
  ○ Questions informed by literature review findings
  ○ Knowledge scores assigned based on answers

● SECTION 3: BEHAVIOUR AND PRACTICES, INCLUDING:
  ○ Hypothetical scenarios
Results
Descriptive Statistics - Demographics

Respondent Gender

- Male: 56, 47.1%
- Female: 63, 52.9%

Respondent Housing Status

- Rent: 69, 58.0%
- Own: 43, 36.1%
- Other: 7, 5.9%
Respondent Age Category

n = 95
Knowledge Score Summary

<table>
<thead>
<tr>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Standard Deviation</th>
<th>Range</th>
<th>Min.</th>
<th>Max.</th>
<th>Count</th>
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<td>14.59</td>
<td>15</td>
<td>18</td>
<td>3.50</td>
<td>17</td>
<td>3</td>
<td>20</td>
<td>119</td>
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“In your opinion, does the quality of the indoor environment have an impact on health?”
“___ species of mould can potentially cause harm to humans"
Descriptive Statistics - Practices

"If you were to clean a small amount of mould yourself, what measures would you take to protect yourself?"

![Bar chart showing protective measures and number of respondents.

- Use rubber gloves: 75
- Use a face mask: 48
- Use protective glasses: 15
- Nothing: 38
- I do not know: 4

Number of Respondents

Protective Measures
“Which of the following resources would you use to learn more about mould and mould remediation recommendations?”

- CMHC WS: 1.2%
- NCCEH WS: 5.9%
- WorkSafeBC WS: 6.7%
- Gov’t of Canada WS: 15.1%
- HealthLinkBC WS: 21.8%
- Call your HA/use their WS: 31.1%
- Ask a friend/family member: 29.4%
- An internet search: 94.1%
<table>
<thead>
<tr>
<th>Knowledge score</th>
<th>Comparison</th>
<th>Test Used</th>
<th>Result</th>
<th>Conclusion</th>
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</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td>Independent samples t-test</td>
<td>$p = 0.0987$</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>Analysis of Variance (ANOVA)</td>
<td>$p = 0.758$</td>
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<tr>
<td>Education</td>
<td></td>
<td></td>
<td>$p = 0.610$</td>
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<tr>
<td>Income</td>
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<td>$p = 0.248$</td>
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<tr>
<td>Housing Status</td>
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<td></td>
<td>$p = 0.762$</td>
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</table>

There is **no statistically significant difference** for all comparisons made.
Discussion
But what do these results mean?

- There is no difference between respondent knowledge score and ...
  - Gender
  - Age Category
  - Highest Level of Education
  - Income Category
  - Housing Status

- No one group would necessarily benefit from targeted educational campaign(s)
Knowledge Scores Were Fair

n=108  n=66

Number of Respondents

Knowledge Scores (/20)

1 1 1 4 1 3 3 8 12 16 14 13 10 8 4
Gaps in Knowledge Exist

Examples of topic areas which appear to be poorly understood:

1. Mould exposure pathways
2. Appropriate personal protective equipment (PPE) selection
3. Where to access valid and reliable information
Knowledge Translation

● Educational material to target identified gaps in knowledge
  ○ E.g. exposure pathways of mould and corresponding PPE to use when cleaning up mould
● HA websites specifically addressing ‘mould’ as a topic and linking to the valid and reliable sources of information
● The existing reliable sources should consider having a higher profile in their information on mould
Future Research Projects

1. An investigation of the public perception of mould as an IAQ issue ...  
   a. For all British Columbia residents, or for all residents of Canada  
   b. Utilizing all possible questionnaire methods

2. A comparison between the number of complaints or inquiries fielded by EHOs which are addressed on their HA website vs. those that are not
Conclusion
In summary...

- Knowledge of the topic was determined to be fair.
- There was no difference between respondent knowledge scores and corresponding gender, age, level of education, income or housing status.
- Insights from this study could be useful for agencies in promoting their resources and for Environmental and Public Health professionals when addressing queries from the public regarding mould.
Thank you


6. Osterberg PM. Indoor Mould, Dust Mite and Endotoxin Exposure in Aboriginal Housing in British Columbia: An Assessment of the Heiltsuk First Nation Community. The University of British Columbia; 2009.


References


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26. Vancouver Island Health Authority. Air Quality [Internet]. 2017. Available from: https://www.interiorhealth.ca/YourEnvironment/AirQuality/Pages/default.aspx

27. Interior Health Authority. Air Quality [Internet]. 2017. Available from: https://www.interiorhealth.ca/YourEnvironment/AirQuality/Pages/default.aspx


31. NCSS, LLC. NCSS 11 Statistical Software; 2016.


References


Question Period