A vibrant, stylized illustration of a residential street scene. In the foreground, a blue bicycle is parked on a sidewalk next to a wooden fence. The fence is adorned with various plants, including pink flowers, white flowers, and purple flowers. A black bird is perched on the fence. In the background, there are several houses with different architectural styles, including a red house with a white cross on its roof and a yellow house with a red door. The sky is a clear blue.

Potential risks and user preferences of helmet-sharing program provided by Vancouver's Mobi bike-share program

Ali Moore

Introduction



- Launched in Downtown Vancouver in July 2016
- 1500 bikes at 150 stations planned
- Provides helmets with each bike

Outline

→ Synthesis of literature

→ Research methods

→ Results

→ Discussion

→ Recommendations & Further Research



Literature Review



- Potential Risks
- Current infection control measures
- Other bike-share programs

Potential Risks

Diseases/conditions of concern

Head Lice

Bed Bugs

Staphylococcus aureus skin infections

Scabies

Scalp Ringworm

Control Measures

- Regular inspection & refreshing
- Deep cleaning
- Helmet liners



Conclusion of literature review

- Sharing helmets poses some risk but it is low
- Effectiveness of Mobi's cleaning regimen is unproven but they're monitoring progress
 - No comparable bike-share programs

Research Methods

Bike Share Helmets - User Preferences

The purpose of this study is to determine if Mobi users are wearing the helmets provided, and if not, what their reasons are. Only those who have used a Mobi bike are eligible to participate in the study. There are no known risks associated with participation in this type of research, and your participation will benefit the field of environmental health. All information collected for this project will be kept confidential, and will be analyzed as anonymous data. If you have provided your email address, it will not be used for any purpose other than notifying you a week prior to the survey and will not be shared with any other parties. You are free to withdraw consent and stop this survey at any time.

I have read and understand the conditions of the consent forms and agree to participate in this study

Yes

No

Please select your age category

10-25 yrs

26-50 yrs

50+ yrs

How often do you currently use Mobi Bikes?

Almost never (less than once per week)

Occasionally (1-2 times per week)

Somewhat often (3-4 times per week)

Often (5-6 times per week)

Very often (7 times per week)

- SurveyMonkey Survey
 - In-person
 - Social media
- Inclusion criteria: anyone who has used a Mobi bike
- Statistical analysis performed in Excel and NCSS

Results

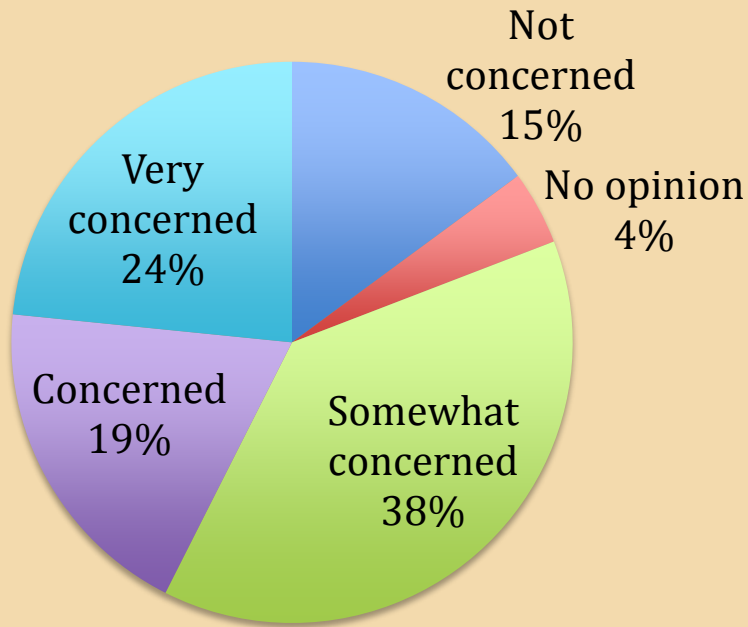


Figure 1. Concern for cleanliness of helmets

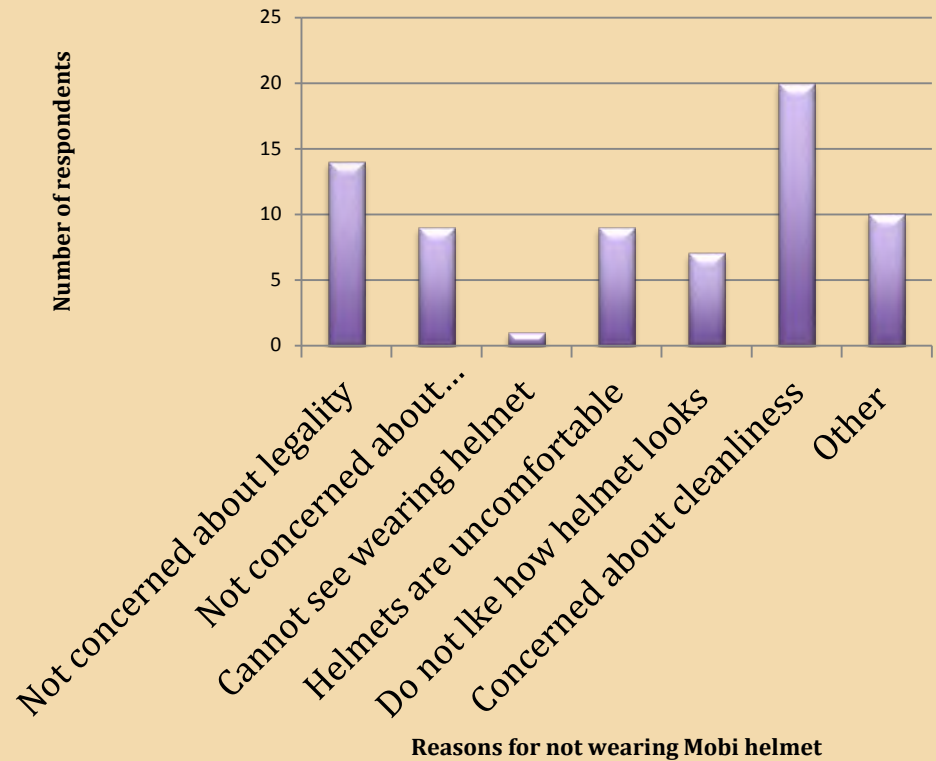





Figure 2. For those who prefer not to wear the Mobi helmet what their reasons are

Results

Hypothesis	Conclusion
1. There is an association between helmet use on personal bike and helmet use on Mobi bike	
2. There is an association between level of concern for cleanliness of the Mobi helmet and likelihood of wearing it	
3. There is an association between most important factor chosen (of aesthetics, cleanliness, safety, comfort/fit, legal requirement) and likelihood of wearing Mobi helmet	

Discussion

- Findings were mostly consistent with what was expected
- Study was limited by the small sample size
 - Seasonal variation in ridership, poor weather, difficulty in predicting the busiest stations, limited social media reach
- Reasons other than those listed for preference to not use Mobi helmet

Discussion

User comments



Discussion

User comments

“Helmets are wet”

“Helmets are not necessary”

Discussion

User comments

Of the 47 participants, 13 indicated that they didn't believe helmets were necessary for various reasons:


- Cycling isn't inherently dangerous
- Cycling is made safer with proper bike infrastructure
- Is it important to normalize cycling without a helmet to encourage cycling for those who have the perception of it being unsafe
- Requiring helmets reinforces the idea that cycling is unsafe

Discussion

Current helmet use research

- Helmet use has been associated with reduced head injuries in several studies
- One US study stated that helmet legislation quadrupled helmet use
- Helmet legislation is most effective when combined with other safety initiatives such as reduced speed limits and improved cycling infrastructure (i.e. separated bike lanes)
- There is safety in numbers!

Recommendations

1. Update helmet cleaning Standard Operating Procedure 
2. Share cleaning procedures with users
3. Use members as a resource to report soiled or damaged helmets to ensure timely response

Future Projects

- Follow-up survey after sharing helmet cleaning procedures
- Risk assessment of public health trade-off (risk of contracting illness vs. risk of not wearing a helmet or using the bike service)
- Cycling safety campaigns
 - Helmet use
 - Infrastructure improvements

Any Questions?



Sources

Photos:

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Vancouver’s new Mobi bike share bikes (Jenni Sheppard/Daily Hive)