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Messaging Trial to Understand Mask Wearing Intentions Beyond the COVID-19 Pandemic

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BIG Difference BC Conference 2022



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 **impact canada**

Background

This project is co-led by PHAC's **Office of Behavioural Science (BeSciO)** and the **Public Health Measures Guidance Division (PHMGD)**, facilitated by PCO's Impact and Innovation Unit.

The Problem

As we proceed beyond the COVID-19 pandemic, it is **unknown how diligently individuals will maintain public health measures** and related behaviours, particularly mask wearing, to reduce the **spread of respiratory illness**, such as colds, flus and COVID-19.

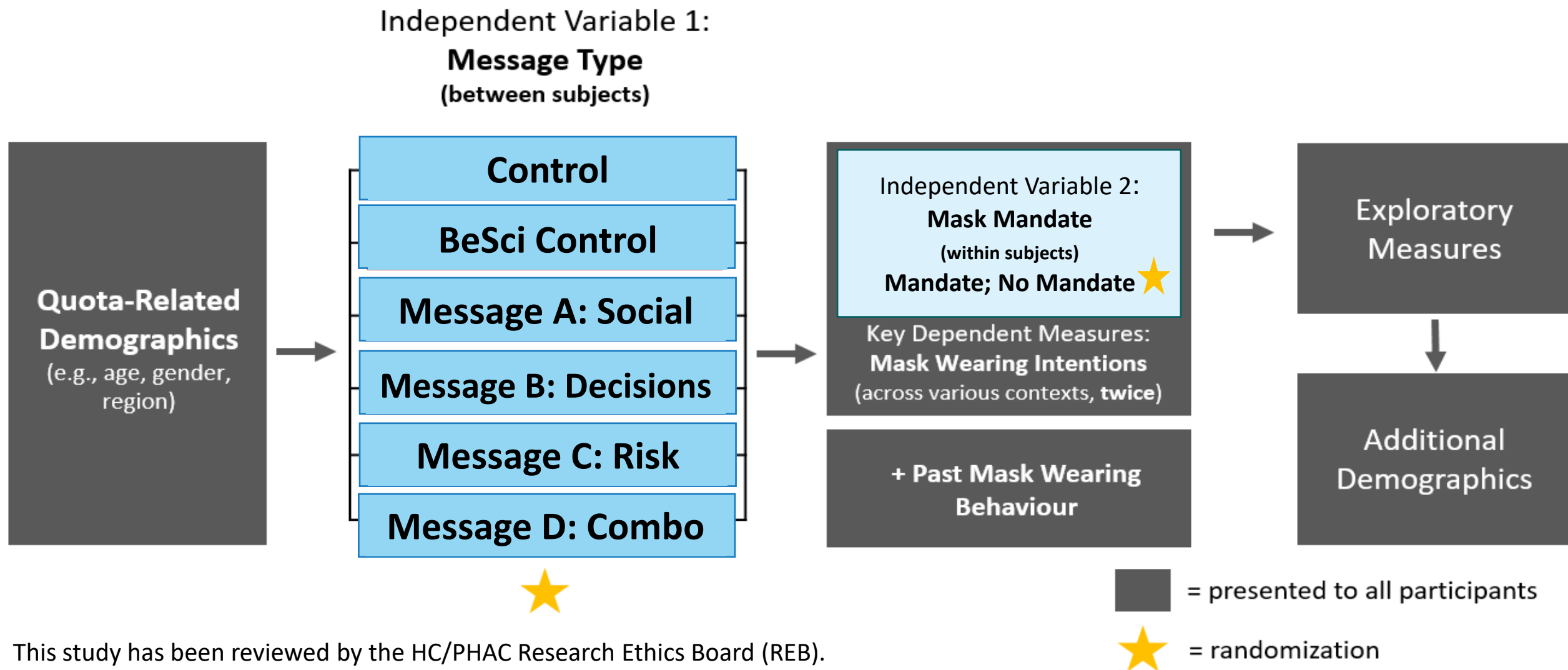


The Objective

The objective of this trial was to quantitatively test different behaviourally-informed messaging frameworks. Determine which is the most effective at promoting **normalized mask wearing attitudes and behavioural intentions to continue "strategic mask wearing"** in higher-risk circumstances beyond the pandemic.



We ran an online randomized controlled trial (RCT) to test the effect of messages on mask-wearing intentions.



This study has been reviewed by the HC/PHAC Research Ethics Board (REB).

Risk-Framed Message

This message targets risk perception paired with a message about efficacy to reduce risk through wearing masks in the second paragraph.

Masks can protect us from more than just COVID-19. Masks can help reduce the spread of other respiratory illnesses, like colds and flus, from person-to-person.

By taking measures to prevent the spread of COVID-19, we saw the fewest number of cases, hospitalizations, and deaths from flu since reporting began.

There are many reasons to wear a mask, but consider wearing one when:

You're feeling unwell, or someone you live with is unwell

It is cold and flu season

You're gathering indoors

You're in a crowded place

Les masques peuvent nous protéger contre plus que la COVID-19. Les masques peuvent contribuer à réduire la propagation d'autres maladies respiratoires, comme les rhumes et les gripes, d'une personne à l'autre.

Grâce aux mesures prises pour empêcher la propagation de la COVID-19, nous avons enregistré le plus petit nombre de cas, d'hospitalisations, et de décès attribuables à la grippe depuis le début des signalements.

Il existe de nombreuses raisons de porter un masque, mais envisagez d'en porter un lorsque :

Vous ne vous sentez pas bien, ou une personne avec qui vous vivez ne se sent pas bien

C'est la saison du rhume et de la grippe

Vous vous rassemblez à l'intérieur

Vous êtes dans un lieu bondé



All messages can be found in the Annex.

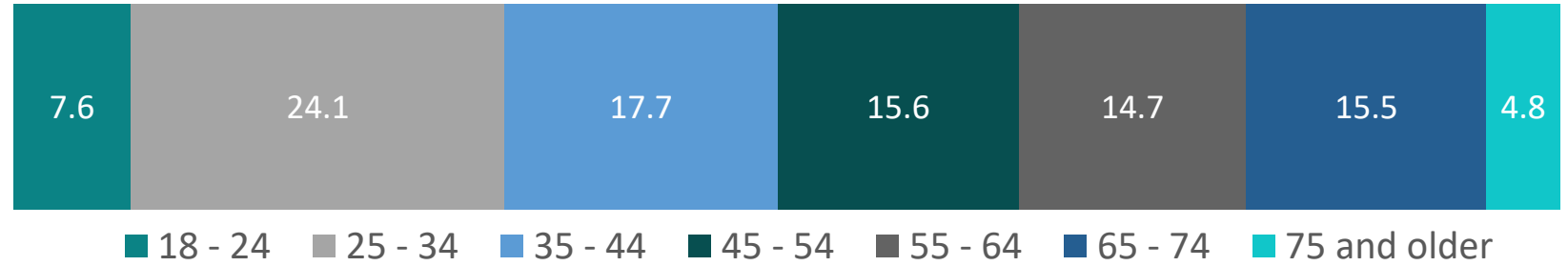
About the Sample

Data was collected online between June 8 – July 12, 2022.

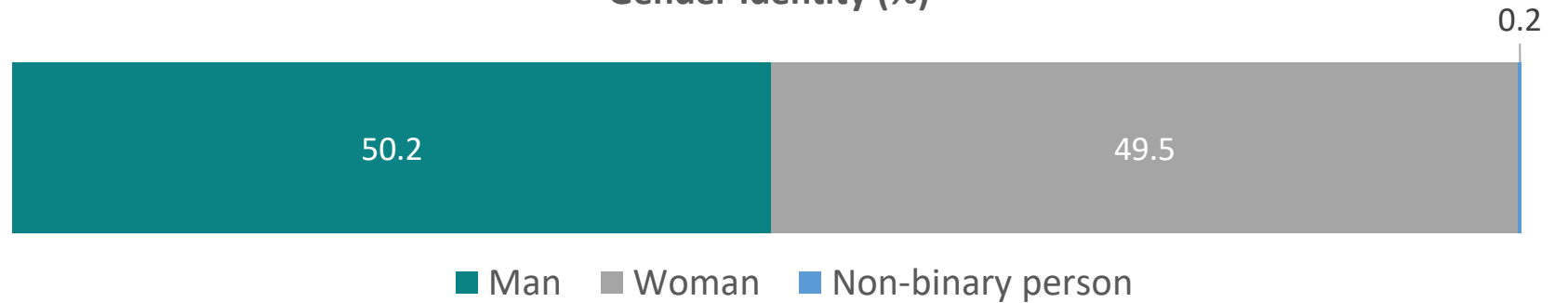
N = 2440 adults living in Canada



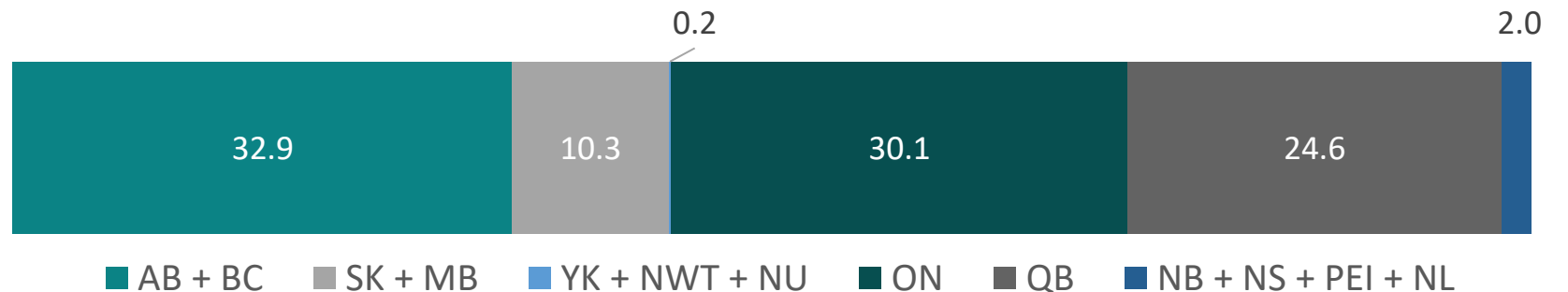
Age Group (%)



Gender Identity (%)



Provinces and Territories, Grouped (%)



Key Finding #1

Mask Mandates

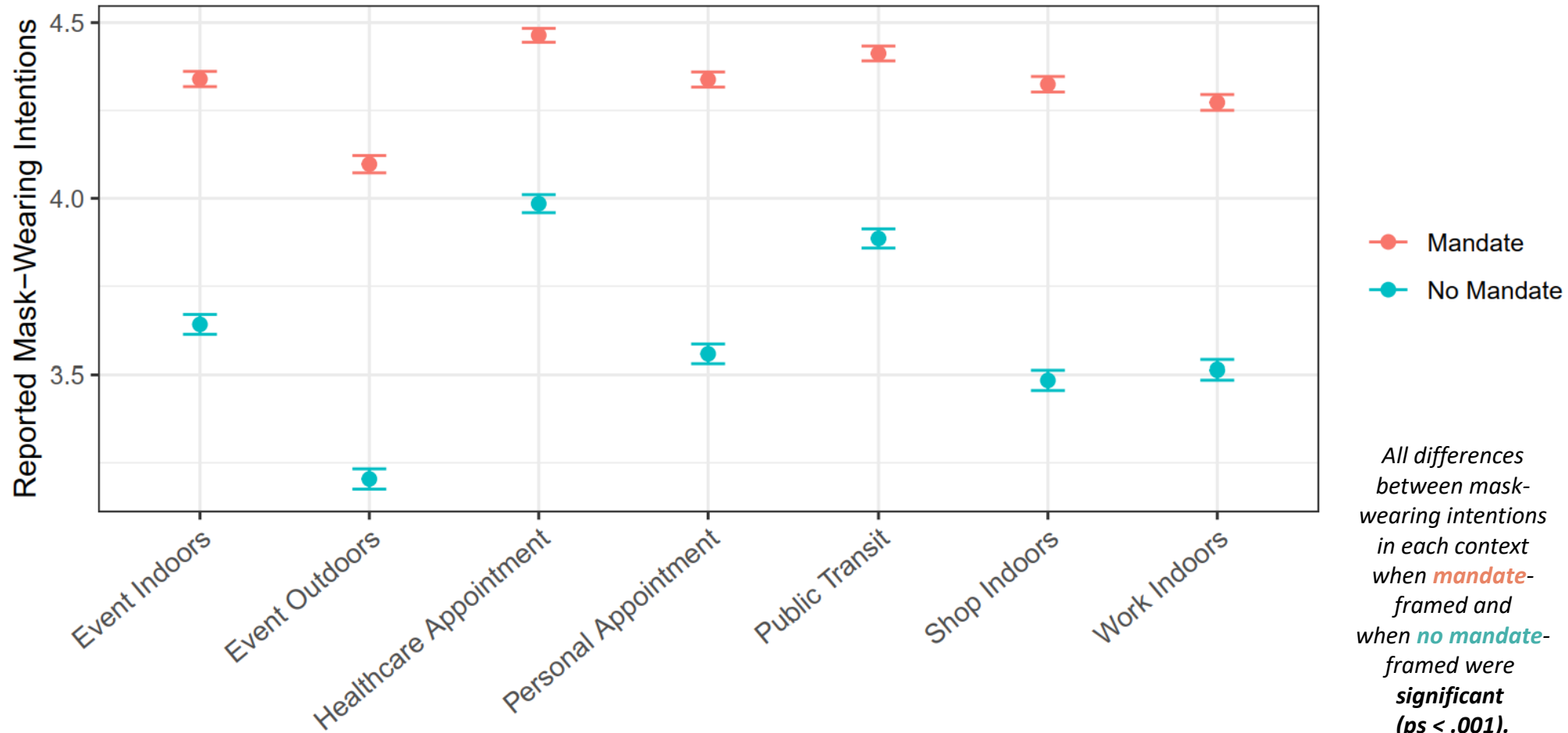


In every context, self-reported mask-wearing intentions were significantly higher under a hypothetical mandate scenario

Key Findings

On average, mask-wearing intentions during Fall 2022 were consistently and significantly higher when there was a hypothetical mandate in place compared to no mandate.

Similarly, intentions to stay at home and wear a mask when feeling sick or unwell were also consistently higher when there is a mandate in place, compared to when there is no mandate.



Note 1: Mask-wearing intentions were scored on a 1 (definitely will not) to 5 (definitely will) scale.

Key Finding #2

Mask Messages



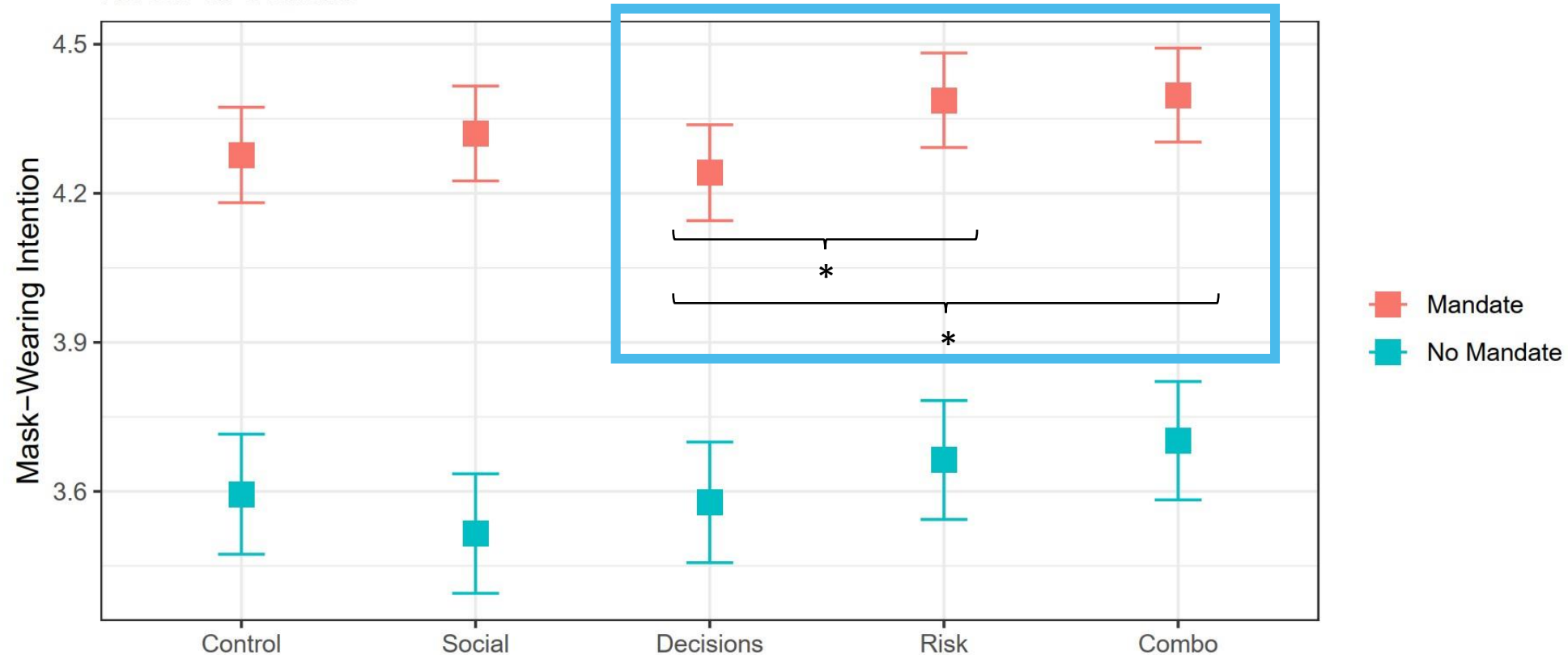
When there is a mandate in place, risk-based message framing can significantly increase mask-wearing intentions compared to other messages

Key Findings

When there was a mandate, both the Risk Message and the Combination Message significantly increased mask-wearing intentions compared to the Decisions Message.

Highlighting risk themes is the most effective framing of messaging to promote mask wearing intentions if/where they are required in Fall 2022.

Predicted Mask-Wearing Intentions
Across all Contexts



* $p < .05$

Note 1: Mask-wearing intentions were scored on a 1 (definitely will not) to 5 (definitely will) scale.

Note 2: Control ($n = 401$), BeSci Control ($n = 406$), Message A (Social; $n = 409$), Message B (Decisions; $n = 398$), Message C (Risk; $n = 411$), Message D (Combo; $n = 415$)

Key Finding #3

Personalized Risk Assessments



When there is a mandate, mask wearing is a simple decision relying on fewer factors. But without a mandate, mask-wearing decisions are more complex.

Key Findings

There were several risk-related factors that significantly predicted mask-wearing intentions when there isn't a mandate in place, compared to the number of predictors when there is a mandate in place.

Mask Wearing Intentions

Mandate

Importance of Mask Mandates (+)

Health status of others in the setting (+)

Indoor vs. Outdoor setting (+)

Health status/risk of others in household (+)

$Adj R^2 = .40, F(12, 2419) = 136.15, p < .001$

No Mandate

Ventilation of the Setting (+)

Vaccination Status of Others (+)

Indoor vs. Outdoor setting (+)

Community Spread (+)

Presence of VOCs (+)

Own Health Status (-)

Importance of Mask Mandates (-)

The number of people present (+)

$Adj R^2 = .48, F(12, 2419) = 190.20, p < .001$

(+) indicates that this variable is positively predicting mask-wearing intentions

(-) indicates that this variable is negatively predicting mask-wearing intentions

Blue boxes indicate beta weights (effect sizes) $> .100$; Grey boxes indicate smaller beta weights ($b > .06$) that were still statistically significant

A total of 12 variables were included in the model, including the Message Condition and Mandate Order variables as covariates.

Through this trial, we've learned more about the impact of mandates and messaging on mask-wearing intentions during Fall 2022

KEY FINDINGS: MASK-WEARING INTENTIONS

APPLICATIONS

Mask Mandate
vs. No Mandate

- Self-reported mask-wearing intentions were significantly **higher in all contexts when there was a hypothetical mandate.**



If mask-wearing is needed to help reduce the spread of a respiratory illness in a certain context, a requirement may drive behaviour.

Message
Intervention

- The message communicating **risks** that can be prevented by PHMs, such as masks, significantly increased mask-wearing intentions only **when mandated.**



When a mask requirement is in place, risk-based messaging may foster adherence.

Personal Risk
Assessments

- Mandates appear to play a role in how individuals are making decisions around mask wearing. When there is a mandate, **fewer** risk factors significantly predict mask-wearing intentions than when there isn't a mandate.



Decision-making about wearing a mask can be made more straightforward by the presence of a requirement.

Limitations and Contextual Considerations

Every study involves limitations. Some that should be taken into consideration when interpreting these findings include:

Small effect sizes were observed

Mandate and No Mandate were hypothetical

Self-reported mask-wearing intentions

Generalizability to the broader population

Broader Contextual Considerations:

- The **dynamic context** of the pandemic, including mandates and mask wearing, over time. Specifically, masks were not mandated in Canada during the time of data collection.
- The **complexity of mask wearing** behaviours (e.g., social, cultural, and political aspects of masks) and relative **novelty** of mask wearing in Canadian social culture prior to the COVID-19 pandemic.

We acknowledge these contextual factors and limitations, and the results were interpreted accordingly.

Conclusions

- This work illustrates how **behavioural science tools and approaches** such as experimentation provide **robust, valuable insights** that can inform decision-making in public health.
- The findings indicate that in high-risk situations **requirements may be useful for driving key behaviours** that can **help limit the spread of respiratory infections**.
- In contexts without a requirement
 - **decision-making is complex and nuanced**, relying on a host of interrelated factors in the **assessment of personal risk**.
 - findings can be leveraged to **develop evidence-based messaging** that incorporates predictive risk factors to enhance mask-wearing intentions and behaviour.



* The findings should be interpreted with some caution as they look at hypothetical behavioural intentions rather than actual behaviour.

Thank you!

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