

University of British Columbia

Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

Impact of Body Dryer Features on Willingness and Perceived Comfort

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Prepared for: Campus and Community Planning

Course Code: PSYC 421

University of British Columbia

Date: 16 April 2023

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Impact of Body Dryer Features on Willingness and Perceived Comfort

Group 2: Climate DOI

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PSYC 421 Environmental Psychology

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April 15, 2023

Executive Summary

Acknowledging the negative effects of wet days exacerbated by climate change and drawing inspiration from water amusement parks, this study aims to examine a novel drying method, the body dryer, and specifically how its hygiene and privacy features affect people's willingness to use and perceived comfort. Regarding this question, we hypothesized that people would show higher levels of willingness and perceived comfort to use the body dryer with hygiene features, as compared to the body dryer with privacy features and the standardized body dryer (control condition) without hygiene or privacy features. A total of 211 participants were randomly assigned to one of the three conditions: control condition, hygiene condition, or privacy condition. They were first asked to view a description and an image of the assigned body dryer, then rate their willingness to use and perceived comfort on scales. Results indicated that the features of body dryers, either hygiene or privacy, had no significant impact on people's willingness to use and perceived comfort. Despite these results being insignificant, this study contributes to the existing literature by proposing and assessing a novel solution that can help UBC community become more climate resilient in the face of climate change.

Introduction

Climate change is a global phenomenon that has far-reaching impacts. According to the United States Environmental Protection Agency (2016), extreme variations in weather have become more frequent and intense, which poses a serious threat to human beings. One of the most noticeable weather events caused by climate change is the increasing intensity of extreme rainfall worldwide (Westra et al., 2014). Numerous studies have demonstrated the adverse impacts of rainy events on individuals' mental health. For instance, people reported less happiness and satisfaction on rainy and snowy days, according to Schwarz and Clore (1983). A study by Tapak et al. (2018) suggested a positive significant relationship between the number of rainy days and the diagnosis of mental illnesses such as schizophrenia, bipolar disorder, and depression. In addition, according to Klimstra et al. (2011), people with a strong aversion to rain are more likely to experience negative emotional states during prolonged precipitation. This negative emotional response to rain may be further compounded by the discomfort caused by wet clothing. Studies further pointed out that exposure to rain can lead to a lower level of comfort due to clothing wetness, which is an already known discomfort factor (Bello et al., 2016; Fukazawa & Havenith, 2009).

Despite the growing recognition by researchers of the negative impacts of rainy weather caused by climate change, most studies that aim to enhance people's resilience tend to concentrate on the broad concept of rain rather than wetness as the specific issue (Dow et al., 2013). There is still a knowledge gap in the literature when it comes to addressing the issue of wetness faced by individuals. Given the high frequency of rain and prolonged winter seasons in the Vancouver area (Chhetri et al., 2019), the goal of our current project is to assist the UBC community in adapting to the increasing prevalence of wetness resulting from climate change. To achieve this, we focus on investigating the potential and feasibility of implementing the body dryer (a device frequently used in water amusement parks that aids individuals in drying their bodies by using heated air to evaporate moisture from the skin and clothing) under the UBC context. Before we put the body dryer into use, our first step is to figure out people's preferences regarding its features and understand how it would contribute to their perceived comfort.

Research Question and Hypotheses

Our study aims to answer the research question: How do specific features of the body dryer, such as privacy and hygiene features, affect people's willingness to use and their perceived comfort? According to Liu et al.'s (2023) study conducted among school staff in university settings, cleanliness as an indoor design feature is rated as most important and has the strongest effect in relation to staff's comfort and overall well-being, while privacy features are found to have the least significant effects in comparison. In light of this information, we have developed two hypotheses for our study. Firstly, we hypothesized that people would show a higher willingness to use the body dryer with hygiene features, as compared to the body dryer with privacy features and the standardized body dryer without hygiene or privacy features. Secondly, we hypothesized that people would show a higher level of perceived comfort by using the body dryer with hygiene features, as compared to the body dryer with privacy features and the standardized body dryer without hygiene or privacy features.

Methods

Participants

Based on a power analysis with a minimum effect size of 0.3, an alpha of 0.05, and a

power of 0.95, our study required a minimum of 177 participants in total. At the end of our data collection, we went beyond the minimum requirement and recruited 214 participants in total. However, 3 participants were excluded from the study as they did not consent to participate, leaving us with a final sample size of $N = 211$. Among the 211 participants, 165 (78.2%) identified themselves as UBC students and 46 (21.8%) as non-UBC students. In terms of gender, 146 (69.2%) of participants identified as females, 55 (26.1%) as males, 6 (2.8%) as non-binary, and 4 (1.9%) preferred not to say. The average age of our participants was $M = 21.52$.

Conditions

Our study employed a between-subjects design where participants were randomly assigned to one of the three conditions: the control condition, the hygiene condition, or the privacy condition. In the control condition, participants viewed a description and image of a standardized body dryer without a door, which allowed multiple people entry. In the hygiene condition, participants viewed a description and image of a body dryer without a door, but with hygiene products such as hand sanitizers and wipes. In the privacy condition, participants viewed a description and image of a body dryer with privacy features, including a lockable, frosted door and the restriction on single person entry (See Appendix A). All other aspects of the body dryer besides hygiene and privacy features, such as appearance and default drying time, were kept consistent across all conditions. The independent variable of our study was the varying features (hygiene and privacy) of body dryers presented to participants.

Measures

The dependent variables of our study were participants' willingness to use the body dryer and their perceived comfort after using the assigned body dryer. To measure participants' willingness to use the body dryer, we asked them to rate their willingness on a scale of 1–5, with 1 indicating “not at all willing” and 5 indicating “willing”. Another independent variable, participant's perceived comfort, was accessed using the published *Perceived Comfort Scale (PCS)* (See Appendix C), which was first introduced in Anderson et al.'s (1996) study of aggression and temperature effects. This scale consists of 11 comfort-related adjectives. These adjectives were measured on a scale of 1–5, with 1 being “very slightly or not at all” and 5 being “willing”. Of the 11 items, 6 adjectives indicate comfort (e.g., cozy), while the remaining 5 adjectives indicate a lack of comfort (e.g., unpleasant). To determine participants' level of perceived comfort, the mean score of their responses to all 11 adjectives, with 5 items that indicate discomfort being reversely coded, were calculated and analyzed.

Procedure

An online survey was designed and distributed using UBC Qualtrics. The survey began with the consent form, followed by the background page that described an extreme wet day scenario and asked participants to imagine being in that situation. Then, participants were directed to a page where they viewed the description and an image of the body dryer with either standardized, hygiene or private features. On the same page, the willingness scale and *PCS* were shown below the image of the body dryer. Following this, an open-ended question was included that asked participants about their preferences for other features of the body dryer. At the end of the survey, participants were asked to provide demographic information, including their affiliation with UBC, year level, gender identity, and age (See Appendix A). Our survey was active for 14 days, running from March 8th to March 21st, 2023. During the collection period, we put up posters with survey links on UBC campus and distributed the survey on various social media platforms (e.g., Instagram, Facebook, WeChat) to maximize exposure.

Results

The statistical analysis performed on our data was a one-way ANOVA with an alpha level of $\alpha = 0.05$ as we wanted to test our first hypothesis. We predicted that participants would show a higher willingness to use the body dryer with hygiene features, as compared to the body dryer with privacy features and the standardized body dryer (body dryer without hygiene or privacy features). However, the hypothesis is rejected due to non-significant results ($p > 0.05$; see Appendix B, Table B1.2), indicating that there were no statistically significant differences between the control condition ($M = 3.93$, $SD = 1.19$), the hygiene condition ($M = 4.04$, $SD = 1.00$), and the privacy condition ($M = 3.79$, $SD = 1.12$) (See Appendix B, Table B1.1). Figure B1 in Appendix B depicts the mean willingness for each condition.

Our second hypothesis predicted that participants would show a higher level of perceived comfort after using the body dryer with hygiene features, as compared to the body dryer with privacy features and the standardized body dryer. We examined the hypothesis by conducting another one-way ANOVA with an alpha level of $\alpha = 0.05$ to observe whether there was a relationship between the comfort perception and features of the body dryer. However, the results ($p > 0.05$; see Appendix B, Table B2.2) indicated that there were no statistically significant differences between the control condition ($M = 3.64$, $SD = 0.62$), the hygiene condition ($M = 3.66$, $SD = 0.70$), and the privacy condition ($M = 3.67$, $SD = 0.72$) (See Appendix B, Table B2.1), leading to the rejection of the second hypothesis. Figure B2 in Appendix B shows the mean perceived comfort for each condition.

Furthermore, we coded the responses to the open-ended question regarding additional features participants would like to see on a body dryer (See Appendix B, Table B3). From the 73 responses received, 17 participants mentioned the desire for privacy-related features, such as a door, with 12 of them coming from the hygiene condition and 5 from the control condition. In addition, 8 participants mentioned more hygiene-related features, including UV disinfection, among which 1 was from the control condition, 2 were from the privacy condition, and 5 were from the hygiene condition. Although the statistical analysis did not support our hypotheses, the results from this open-ended question suggest that participants still value the hygiene and privacy features of the body dryers.

Discussion

Results demonstrated that there were no significant differences between participants' willingness to use the body dryer and their perceived comfort level after using it across the three conditions. Therefore, our hypotheses were rejected, indicating that the features of body dryers, either hygiene or privacy, did not significantly impact people's willingness and comfort perceptions regarding the use of the body dryer. These results were inconsistent with Liu et al.'s (2023) study mentioned previously, which highlighted that cleanliness was perceived as the most important indoor design feature with a significant impact on the people's comfort, while privacy features were viewed as the least important.

One possible explanation for the results of our study may be that our current study design utilized a between-subjects design where participants were assigned to view only one type of body dryer. In this case, participants might have perceived their assigned body dryer as the only option available. To explore preferences among various features of the body dryers, a within-subjects design could be considered in future studies, as the within-subjects design would allow participants to view and compare all available features of the body dryers and select their most

preferred option. It is also possible that the notion of the body dryer itself is relatively novel, thus the specific features of the body dryer may not yet be critical to consider at this stage.

It is important to acknowledge the limitations of this study. Firstly, there are two selection biases presented in our sample collection. While 21.8% of the sample are non-UBC students, their preferences for the body dryer may not accurately reflect the needs and preferences of the UBC community. Although the sample size of our study was adequate, there was an imbalance in the gender distribution, with a significantly higher proportion of females (69.2%) compared to males. This made our results biased toward females' preferences and underrepresent the preferences of males. These limitations in regard to sample collection could impact the validity of our study. Therefore, we recommend that future studies include more gender-balanced as well as more UBC-specific samples to obtain a more comprehensive understanding of the needs of UBC community.

Moreover, one potential confounding variable has been identified in our study design. Specifically, the private body dryer condition included two privacy features: a door and a restriction on single person entry. The inclusion of both features was intended to enhance users' privacy experiences and differentiate the features between conditions. However, by imposing a limit on the number of users allowed per entry, it became unclear whether the presence of the door, the restriction on single person entry, or both features together influenced participants' willingness to use the body dryer and their perceived comfort. To address this issue, future studies should include only one identifiable feature to increase the validity of the study. For example, for our study, consider removing the restriction on single person entry and only including the door feature that could keep the occupants unobserved.

Nonetheless, the overall high willingness and perceived comfort level reported in all three conditions suggested the feasibility of implementing body dryers at UBC. In addition, in our qualitative analysis of the open-ended question, we noted that despite participants expressing high willingness and high perceived comfort in the hygiene condition, some participants still expressed their need for privacy-related features, indicating that both hygiene and privacy considerations matter and should be taken into account.

Broadly speaking, our study takes a step forward by examining a new drying method, specifically its features and its impact on people's willingness and perceived comfort. This study lays the groundwork for future research to explore innovative solutions to help people adapt to climate change.

Recommendations for UBC Client

In light of our research, neither the hygiene nor privacy features of the body dryer significantly influence people's willingness to use it or their perceived comfort levels. As far as we know, UBC Climate Emergency has been spearheading efforts to prompt the UBC community to proactively address the challenges of climate change and take meaningful action towards climate resilience. Despite our results being insignificant, this research can provide a new perspective to help further strengthen UBC's ability to protect its community under certain scenarios, especially on wet days.

One key advantage of our research is that we introduced a novel drying method to help the UBC community adapt to wet situations, which has the potential to be implemented within the UBC context as it has already been successfully commercialized by companies like HayStack. Through our research, UBC can conserve resources that would otherwise be needed for researching, developing, and manufacturing the body dryer.

In terms of environmental sustainability concerns, Joseph et al.'s (2015) study suggested that dryer products have less environmental impact compared to disposable products, such as paper towels. Similarly, the adoption of body dryers can contribute to environmental sustainability. One of the leading companies in this industry, HayStack, has already developed various types of body dryers. Their dryers have the ability to recycle warm ambient air, which reduces their power consumption and makes them an eco-friendly option for UBC.

Nevertheless, even if our proposed body dryer might not be adopted due to various factors such as financial concerns, our research has identified several frequently mentioned features through open-ended questions in the survey that inquire about people's preferences regarding body dryer attributes. These transferrable insights could potentially be applied to other UBC facilities, offering valuable guidance for their enhancement. Possible applications of our findings may involve equipping washrooms with supplementary hygiene products like wipes and upgrading toilet partitions for increased privacy. The environment in public dining areas at UBC Nest or Life Building could also be improved by incorporating additional hygiene facilities.

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Appendix A Survey

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Qualtrics Survey Software

Block 1: Consent



UNIVERSITY OF BRITISH COLUMBIA

Department of Psychology
University of British Columbia
Vancouver, BC, V6T 1Z4
Phone: 604.822.2755
Fax: 604.822.6923

Consent Form

Class Research Projects in PSYC 421 - Environmental Psychology

Principal Investigator:

Dr. Jiaying Zhao
Course Instructor
Department of Psychology
Institute for Resources, Environment and Sustainability
Email: jiayingz@psych.ubc.ca

Introduction and Purpose

Students in the PSYC 421 – Environment Psychology class are required to complete a research project on the UBC campus as part of their course credit. In this class, students are required to write up a research proposal, conduct a research project, collect and analyze data, present their findings in class, and submit a final report. Their final reports will be published on the SEEDS online library (<https://sustain.ubc.ca/teaching-applied-learning/seeds-sustainability-program>). Their projects include online surveys and experiments on a variety of sustainability topics, such as waste sorting on campus, student health and wellbeing, food consumption and diet, transportation, biodiversity perception, and exercise habits. The goal of the project is to train students to learn research techniques, how to work in teams and work with UBC clients selected by the UBC SEEDS (Social Ecological Economic Development Studies) program.

Study Procedures

If you agree to participate, the study will take about 10 minutes of your time. You will answer a few questions in the study. The data will be strictly anonymous. Your participation is entirely voluntary, and you can withdraw at any point without any penalty. Your data in the study will be recorded (e.g., any answer you give) for data analysis purposes. If you are not sure about any instructions, please do not hesitate to ask. Your data will only be used for student projects in the class. There are no risks associated with participating in this experiment.

Confidentiality

Your identity will be kept strictly confidential. All documents will be identified only by code number and kept in a locked filing cabinet. You will not be identified by name in any reports of the completed study. Data that will be kept on a computer hard disk will also be identified only by code number and will be encrypted and password protected so that only the principal investigator and course instructor, Dr. Jiaying Zhao and the teaching assistants will have access to it. Following the completion of the study, the data will be transferred to an encrypted and password protected hard drive and stored in a locked filing cabinet. Please note that the results of this study will be used to write a report which is published on the SEEDS library.

Remuneration

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Qualtrics Survey Software

There is no remuneration for your participation.

Contact for information about the study

This study is being conducted by Dr. Jiaying Zhao, the principal investigator. Please contact her if you have any questions about this study. Dr. Zhao may be reached at (604) 827-2203 or jiayingz@psych.ubc.ca.

Contact for concerns about the rights of research subjects

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail RSIL@ors.ubc.ca or call toll free 1-877-822-8598.

Consent: Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time. You also may postpone your decision to participate for 24 hours. You have the right to choose to not answer some or any of the questions. By clicking the “continue” button, you are indicating your consent to participate; hence, your signature is not required. The researchers encourage you to keep this information sheet for your records. Please feel free to ask the investigators any additional questions that you have about the study.

Ethics ID: H17-02929

Version 4: June 20, 2022 (Ethics ID: H17-02929)

- I consent to participate in this study.
 I do not consent to participate in this study.

BACKGROUND**Background:**

Due to the effects of climate change, our planet is experiencing more frequent and severe extreme weather conditions, such as heavy snowfall, floods, and pouring rain. As a result, public transportation and accessibility have been adversely affected, as was the case with the snowstorm on December 20th, 2022.

This snowstorm caused significant delays and cancellations in public transit, leaving some UBC students stranded overnight on campus with their clothes wet and unchangeable.



Now, imagine that you're on campus with wet clothes. You will view a picture of body dryer and brief description of it on the next page. After viewing it, please carefully answer the questions below.

CONTROL CONDITION

This is a body dryer without a door. The body dryer has a button inside connected to a blowing vent. When the button is pressed, it will start releasing heated air. You have a default drying time of 2 minutes to get roughly dry, and you can restart the dryer by simply pressing the button again. This body dryer allows multiple people to use at a time.

Please take a look at the picture below:



Imagine you can use this body dryer for 2 minutes to dry. Please indicate how willing you are to use this body dryer on a scale of 1-5:

	1 not at all willing	2 unwilling	3 undecided	4 somewhat willing	5 willing
Willingness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Imagine you have used this body dryer for 2 minutes to dry. Please indicate how you feel after you have used this body dryer on a scale of 1-5:

	1 very slightly or not at all	2 a little	3 moderately	4 quite a bit	5 extremely
I feel comfortable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel pleasant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel stressful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel cozy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel restful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel uncomfortable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel miserable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel snug	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel unpleasant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel painful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel soothing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HYGINE CONDITION

This is a body dryer **without a door**. The body dryer **has a button inside** connected to a blowing vent. When the button is pressed, it will start releasing heated air. You have a default drying time of 2 minutes to get roughly dry, and you can restart the dryer by simply pressing the button again. The **body dryer is equipped with different types of hygiene products, such as sanitizers, wipes, and shoe covers** for you to use. This body dryer allows **multiple people to use at the same time**.

Please take a look at the picture below:



Imagine you can use this body dryer for 2 minutes to dry. Please indicate how willing you are to use this body dryer on a scale of 1-5:

	1 not at all willing	2 unwilling	3 undecided	4 somewhat willing	5 willing
Willingness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Imagine you have used this body dryer for 2 minutes to dry. Please indicate how you feel after you have used this body dryer on a scale of 1-5:

	1 very slightly or not at all	2 a little	3 moderately	4 quite a bit	5 extremely
I feel comfortable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel pleasant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel stressful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel cozy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel restful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel uncomfortable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel miserable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel snug	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Qualtrics Survey Software

	1 very slightly or not at all	2 a little	3 moderately	4 quite a bit	5 extremely
I feel unpleasant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel painful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel soothing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PRIVACY CONDITION

This is a body dryer with a **lockable, frosted door**. The body dryer has a **button inside** that is connected to a blowing vent. When the button is pressed, it will start releasing heated air. You have a default drying time of 2 minutes to get roughly dry, and you can restart the dryer by simply pressing the button again. This body dryer **allows only one person to use at a time**.

Please take a look at the picture below:



Imagine you can use this body dryer for 2 minutes to dry. Please indicate how willing you are to use this body dryer on a scale of 1-5:

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Qualtrics Survey Software

	1 not at all willing	2 unwilling	3 undecided	4 quite a bit	5 willing
Willingness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Imagine you have used this body dryer for 2 minutes to dry. Please indicate how you feel after you have used this body dryer on a scale of 1-5:

	1 very slightly or not at all	2 a little	3 moderately	4 quite a bit	5 extremely
I feel comfortable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel pleasant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel stressful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel cozy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel restful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel uncomfortable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel miserable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel snug	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel unpleasant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel painful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel soothing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Additional questions

If the body dryer is implemented at UBC, are there any other features you would like to see?

Demographics

Are you a UBC student?

- Yes
- No

What is your year level at UBC?

- Year 1
- Year 2
- Year 3
- Year 4

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- Year 5+
- Graduate
- Other

What gender do you identify as?

- Male
- Female
- Non-binary
- Other

What is your age?

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Appendix B
Figures and Tables

Table B1.1*Descriptive Statistics for Mean Willingness in Each Body Dryer Condition*

Body Dryer Condition	<i>M</i>	<i>SD</i>	<i>N</i>
Control (Standardized Body Dryer)	3.93	1.19	68
Hygiene	4.04	1.00	72
Privacy	3.79	1.12	71

Table B1.2*One-way ANOVA for Mean Willingness in Each Body Dryer Condition*

	<i>df</i>	Sum of Squares	Mean Square	<i>F</i>	<i>p</i>
Body Dryer Condition	2	2.29	1.15	0.941	0.392
Residuals	208	253.34	1.22		

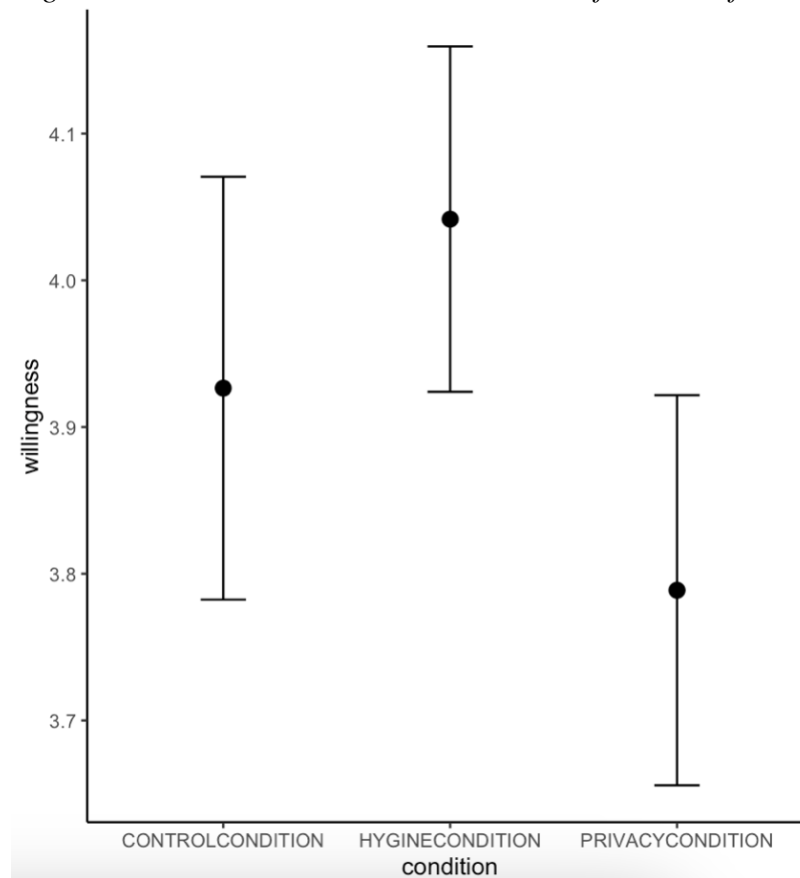
Figure B1*Plot of Mean Willingness and Error Bars with Standard Error for Each of the Three Conditions*

Table B2.1*Descriptive Statistics for Mean Perceived Comfort in Each Body Dryer Condition*

Body Dryer Condition	<i>M</i>	<i>SD</i>	<i>N</i>
Control (Standardized Body Dryer)	3.64	0.62	68
Hygiene	3.66	0.70	72
Privacy	3.67	0.72	71

Table B2.2*One-way ANOVA for Mean Perceived Comfort in Each Body Dryer Condition*

	<i>df</i>	Sum of Squares	Mean Square	<i>F</i>	<i>p</i>
Body Dryer Condition	2	0.05	0.0235	0.05	0.951
Residuals	208	97.07	0.4667		

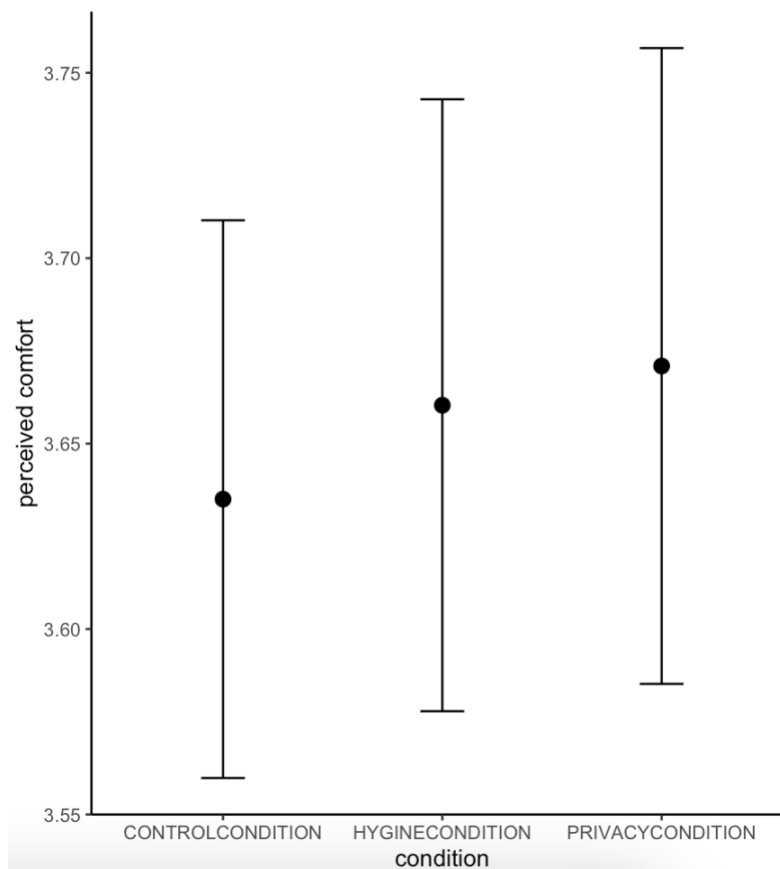
Figure B2*Plot of Mean Perceived Comfort and Error Bars with Standard Error for Each of the Three Conditions*

Table B3
Coding Result of Open-Ended Question

Features\Condition	Control condition	Privacy condition	Hygiene condition	Sum
Privacy-related (e.g. door)	5	N/A	12	17
Hygiene-related (e.g. UV disinfection)	1	2	5	8
Other dryers (e.g. shoe, umbrella)	4	2	8	14
Quiet	2	2	3	7
Seats	1	1	3	5
Storage/Hanger	1	2	2	5
Fast enough	4	N/A	1	5
Mirror	1	N/A	3	4
Appearance	1	N/A	2	3
Scented	N/A	1	2	3
Towel	1	1	N/A	2
Sum	21	11	41	73

Appendix C
Perceived Comfort Scale (PCS)

This scale consists of a number of words that can be used to describe the conditions of a room. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel each word describes this room right now, that is, at the present moment. Use the following scale to record your answers.

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely
____ comfortable	____ cozy	____ miserable*	____ painful*	
____ pleasant	____ restful	____ snug	____ soothing	
____ stressful*	____ uncomfortable*	____ unpleasant*		

*Item needs to be reverse scored. The asterisks are not present in the scale when presented to research participants.

Appendix D

Group Member Contribution

In our group project, every member contributed to the tasks, including writing the proposal, running data collection, creating the presentation, and writing the final report. The extent of contribution varied among members during these processes:

During the proposal writing process, everyone participated in in-person meetings and contributed to the writing.

For data collection, all members contributed equally to distributing the survey online. Additionally, Xianyi took the lead in conducting in-person data collection on UBC campus. When it came to generating ideas for survey conditions, Xianyi and Clarisse made significant contributions. Yuxuan and Kelsey were responsible for editing the images of body dryers, while Zifeng and Xinyu helped find a suitable scale for the study and checked the overall grammar and structure of the survey.

In the data analysis process, Clarisse took on full responsibility for running analysis, producing charts, and communicating ideas with Dr. Zhao and TAs.

For creating the presentation slides, Xinyu made significant contributions to writing the slide contents, while Zifeng was responsible for organizing the slide structure and checking grammar.

In the final report writing, Xinyu was in charge of the executive summary, methods, and discussion sections. While Zifeng and Yuxuan made major contributions to the literature reviews and discussion sections, Kelsey assisted in finding some literature for literature reviews. Clarisse was responsible for the results section, and Alex took charge of the section of recommendations for clients.

In addition to these major course assignments, Zifeng Zhang was fully responsible for scheduling meetings and managing email communications with the professor and TAs.