

COVID-19 Experiences of International Students in Vancouver, British Columbia, Canada

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Abstract

This study looked into the lived experiences of international students during the COVID-19 pandemic in Vancouver, British Columbia, Canada. The research focused on how international students viewed the COVID-19 pandemic, their personal, social, economic, health and hygiene, and schooling experiences. A validated and reliable researchers-made questionnaire was used. Weighted means and Fisher's Exact Hypothesis Testing on Association were used to analyze the responses of the international students. The researchers used Fisher's exact test since they wanted to know whether the proportions for one variable were different among values of the other variable. Foreign students had a solid grasp of the potential risks COVID-19 posed and accepted the associated lockdown requirements. The survey results indicated that the students' nationality played a vital role in their perception of their financial health and well-being. Students were insecure with their accommodation, expenses, and scheduling. Lastly, they also felt alone, and economically challenged.

Keywords: COVID-19, pandemic, international students, Vancouver, Canada

Introduction

The United Nations Department of Economic and Social Affairs (n.d.) labeled COVID-19 as a human, financial, and collective catastrophe impacting directly on societies. COVID-19 does not differentiate, affects populations across the world, and has penetrated the core of humanity. Despite attempts by societies and leaders to guard themselves, the pandemic destroyed lives, crippled governments, tore families apart, ravished global financial markets, and proved how interdependent we are as nations ("Rethinking Social Change in the Face of Coronavirus," n.d.).

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On March 18, 2020, Mike Farnworth (BC Public Safety Minister) announced a public health emergency in reaction to the developing threat of COVID-19. The province of British Columbia (BC) could now curtail travel to or from the province, obtain, fix costs, or limit food, apparel, gas, petroleum, or other commodities as well as the use of property, service industries and tools. In addition, through this announcement, health authorities (federal and provincial) would mount a speedy and efficient comeback to the outbreak. To assist in flattening the infection curve, Canadian authorities released comprehensive strategies to limit the spread of the virus (Government of Canada, 2020a). It explained precise actions that would safeguard people and societies from contracting and spreading the virus. As a direct response, Canada passed comprehensive regulations to limit the financial effects of COVID-19 (Canadian Press, 2020).

Across Vancouver, medical professionals, through Dr. Gerald Da Roza (Head of Medicine at Royal Columbian Hospital in New Westminster) compared BC to Italy. In downtown Vancouver, eateries, coffee shops and diners persistently remained open for business, served eat-in patrons and permitted extended lineups. As a direct result of this development, doctors requested Dr. Bonnie Henry, BC Provincial Health Officer, to sanction firm control measures and inform citizens (Crawford & Johnston, 2020).

Splinter protest factions emerged in the West End and various areas around Vancouver, in spite of the noticeable international effect of COVID-19. The activists demanded that the lockdown be lifted. Some promoted counter-narratives, claiming that the virus was a ruse and that supplying treatment was the correct solution rather than vaccination drives. Adrian Dix, BC Health Minister viewed the activists as individuals with limited views. Many residents reported feeling that their personal safety was at stake amidst the demonstrators. Vancouver Police, however, reassured them that they would keep an eye on the rallies (St. Denis, 2020).

On March 17, 2020, John Horgan, BC Premier, declared their decision to suspend face-to-face classes from kindergarten to Grade 12 (Mangione, 2020a). When this decision was made public, all post-secondary institutions in the province followed suit. As a result of this colleges and universities drastically moved all student instruction and assessment to online modality (Ebrahim, 2020). Since classes were held virtually, college and university administrative operations were also done virtually and so office administrative staff were working from home. This scenario rendered the college and university campuses deserted without any form of in-person attendance and activity.

In Canada, international students immediately are introduced into Canadian society. International students in Canada do not live in a bubble. A huge percentage of colleges and universities do not have exclusive dormitories for their students. These students live independently by renting an entire apartment, a room, or any form of accommodation (Canadian Bureau of International Education, 2020). For international students to be immersed even deeper into the Canadian way of life, the government allowed international students to work up to 20 hours a week. Having these conditions enjoyed by the international students themselves, made them feel basically integrated into the very fiber of Canadian society. Therefore, the experiences of the locals were generally experienced also by the international students (“Student life in Canada,” 2021)

Research Questions

The authors of this paper were interested to determine the experiences of international students of Vancouver, British Columbia, Canada during the COVID-19 pandemic. It is to this end that the research question of this scholarly work be posed: “What is the extent of COVID-19 related experiences of International students in Vancouver, BC, Canada?” The researchers identified factors as key components of this investigation. The researchers agreed to examine the lockdown, personal, social, health and hygiene, economic and schooling experiences of international students amidst a worldwide life-threatening health crisis.

Literature Review

Personal Experiences

Being away from the comfort of one’s home is challenging to say the least. The experience becomes extraordinarily difficult when it is compounded with having to deal with a global pandemic that claimed millions of lives. Studies made direct links between the elderly and the threats associated with severe illness as a result of contracting COVID-19. Older patients presented an increased likelihood of requiring admission to a hospital (The U.S. Centers for Disease Control and Prevention, 2020a). This was concluded after an early influx of fatalities from long-term residential care facilities (Holliday, 2020). Initially, COVID-19 appeared to be only affecting the elderly and those with underlying illnesses, resulting in many younger individuals feeling less vulnerable. This was particularly evident in the case of David, from Indiana, USA, a

seemingly vigorous 27-year-old man who was in his final year as a medical student. David is a health fanatic who exercised up to six times a week at the gym. His body is muscular and toned. Applying his medical knowledge, he was committed to recommended hygiene routines and practiced social distancing. Heeding all the warnings, David believed he was not susceptible to the coronavirus. Finally, he too was exposed to the virus, ending in a positive test result (Vega, 2020).

It is not unusual to be frightened, tense and apprehensive when witnessing others deal with the fallout of the pandemic (“Apart. Not alone.,” 2020). A large proportion of foreign students across Canada felt concerned about being removed from relatives, completing studies and finding accommodation. As campus residences shut down, students were forced to seek alternative housing during the pandemic, leaving foreign students feeling more abandoned and helpless (Gomez et al., 2020). They were left with two choices: to return home to relatives or to stay in Canada to avoid entry issues upon their return (Zhao, 2020). As the pandemic took its toll around the world, related buzzwords such as “new normal” emerged. In the absence of a so-called cure, this term was adopted throughout the world. The term “new normal” refers to the risks of contracting COVID-19 while going about one’s normal routine until effective shots were made available (Maragakis, 2020).

Social Experiences

Around the globe, people were mandated to quarantine since the start of the pandemic. During this time, schools and universities closed their doors, some were forced to work from home, while others were terminated (MacLeod, 2020; Dangerfield, 2020). Government leaders requested their residents refrain from in-person interaction and practice safe distancing protocols to delay the spread and finally “level the infection curve” (The U.S. Centers for Disease Control and Prevention, 2020b).

Some governments encouraged complete “physical distancing” rather than mere “social distancing” to emphasize the need to be a minimum of two meters apart from others and to always observe preventative measures such as masking up. Experts explained that social distancing as an approach was dissimilar to physical distancing (Maragakis, 2020). Individuals were instructed to be physically distant by working remotely rather than in the workplace, continuing education online, connecting with others through social media platforms and cancelling summits, events and gatherings. By mid-March 2020, several tertiary institutions had switched to online learning in answer to the warning calls of the BC provincial leadership (Steady, 2020).

Canadian authorities wasted no time in issuing guidelines on physical distancing. Canadian citizens were advised to steer clear from overcrowded areas and get-togethers, physical forms of greeting, restrict contact with higher-risk adults, and keep a safe distance of at least six feet. Residents were requested to remain home, limit in-person contact and rather use mobile applications (Government of Canada, 2020a). As a direct consequence, online purchases soared to 99.3% between February and May 2020 (The Canadian Press, 2020b). Many relied on online communication tools such as Zoom, Facetime and Skype to contact relatives, co-workers and friends (Teboe, 2020).

As universities and colleges in Canada closed their campuses, classes were pivoted to online mode. These international students were so far away from their families, they found themselves increasingly isolated, lonely, and worried about their future (Gomez et al., 2020). The COVID-19 restrictions also limited students’ from personally knowing their professors and develop personal relationships with their classmates. Moreover, these international students failed to personally experience the diversity of Canadian universities and colleges (Alam, 2020). Students resorted to emails, Zoom, and Skype either for guidance from professors and supervisors or to complete team-based assignments and projects (Belle, 2020)

Health and Hygiene Experiences

One of the most pressing issues international students faced during the pandemic were related to health and hygiene. COVID-19 being a communicable disease, international students needed to adhere to the health protocols issued, implemented and monitored by the BC Ministry of Health.

The rapid rate of infection had heavily impacted public healthcare structures, financial markets and communities across the globe, according to WHO's Dr. Tedros Adhanom Ghebreyesus and EU Commissioner Jutta Urpilainen (n.d.). The Canadian government recommended timed, recurrent handwashing in an attempt to help contain the spread of the virus.

Public health organizations all over the world issued directives to limit the spread of the virus. The Massachusetts Institute of Technology Medical (n.d.) laid down the following tips to help prevent infection: 1. Commit to sanitizing hands often with hand cleanser and clean water. Conceal coughs and sneezes with the inside of the elbow, do not touch your face, isolate in case of illness and get medical assistance. 2. Keeping to social distancing protocols by remaining two meters away

from others and refraining from physical contact while greeting. Make a concerted effort to circumvent large groups of people and conduct online meetings instead. 3. Every individual was advised to mask up in public. 4. Keeping surfaces sanitary by using anti-bacterial products, specifically focusing on items regularly touched, such as mobile screens (MIT Medical, n.d.). Medical experts in infectious disease control and epidemiology worldwide have emphasized the significance of adapting to recommended sanitizing practices. Evidence demonstrated that the easiest way to contain the spread of COVID-19 virus begins with hand sanitizing (Mineo, 2020).

One of the most vulnerable segments of the population is the international students. They experienced specific practical and emotional challenges during the pandemic, and are at risk of mental ill-health, but may not actively seek out support from university services. Proactive and personalized approaches to student support will be important for positive student experiences and the retention of students who are studying abroad. The rapid transition to online learning during the pandemic presented unique challenges for international students. Unfamiliar online learning environments led to difficulties in articulating educational issues and queries in a second language, which may have limited access to previously received support (Al-Oraibi et al., 2022).

Economic Experiences

Canadian education is quite costly. The Canadian federal government allowed international students to work for a maximum of 20 hours a week. The income students earn from their employment helps them pay for their rent, transportation and food. Thus, during the COVID-19 pandemic, students' potential incomes were threatened.

According to the Vancouver Economic Commission ("Economic Impact," n.d.), pre-pandemic, the city had all-time low joblessness figures at just 4%. This rate had climbed to 11% by May 2020. Various divisions of the British Columbia economy were completely immobilized during the pandemic, leaving hundreds of thousands out of work and their futures uncertain (Shaw, 2020). According to Finance Minister Carole James the economic impact of COVID-19 varies depending on the gender, income and the sector where one is employed (Mangione, 2020b). Minister James further explained that those employed in hospitality, retail sectors and food industries had especially been hard-hit as far as lay-offs were concerned.

By March 2020, the Canadian administration announced directives concerning sustained employment during the pandemic (Government of Canada, 2020a). This report outlined the entitlements and obligations of workers. To prevent misunderstandings, national and provincial requirements were merged. The orders included the obligation on workers to remain informed on developments relating to the pandemic, and to follow leadership procedures on arriving for duty and associated workplace safety regulations. Immigration, Refugees and Citizenship Canada provisionally deferred the 20-hour work week regulation for those in possession of student visas (El-Assal & Thevenot, 2020) and were employed in necessary services like health, critical infrastructure, or the allocation of food and other critical items. This decision shows the importance the Canadian government placed on international students who were already absorbed in the Canadian labor market to help meet the additional dilemmas posed by the pandemic. Federal procedures were introduced as a mark of appreciation to foreign students. The Canadian Bureau on International Education agreed that the Canada Emergency Response Benefit (CBIE, 2020) would also be available to foreign students who met the requirements. The unfortunate reality was that students were not informed that they may be eligible for any type of government assistance (Bula & Xu, 2020; "Canada: Some Int'l Students Eligible for Support," 2020).

Academic Experiences

International students in Canada were supposed to be on active study for them to qualify for Post-Graduation Work Permit. Face-to-face modality had been generally also the way international students were educated in their respective home countries. However, when the lockdown was implemented due to the COVID-19 pandemic, international students were forced to attend classes and deal with university-related transactions virtually.

There are two vital provisions that study visa holders in Canada need to adhere to. They shall enroll at a Designated Learning Institution until they complete their studies and actively pursue their course of the program of study (Government of Canada, 2020b). The online or remote study is not incorporated in the definition of active study, as it does not require the individual's physical presence in the country (Government of Canada, 2020c). However, at the start of the pandemic, the Canadian administration conceded to some changes in the policies that regulate study visa permits. During this period, Immigration, Refugees and Citizenship Canada made allowances for online learning (El-Assal & Thevenot, 2020) without facing consequences when applying for post-graduate work permits (PGWP).

From March, almost all tertiary institutions in BC transitioned to online learning (Zussman, 2020). This was part of a strategy to avoid campus-wide infections and place staff and faculty at risk (Iwai, 2020). Once declared a pandemic by the World Health Organization, Canadian academic institutions took additional precautions in an attempt to eliminate the virus. Canada's swift response harked back to the lasting effects of the 2003 SARS outbreak. Campus management decisions were guided by both federal and provincial announcements concerning the spread of COVID-19 (McQuigge, 2020).

Prior to the shift to distance learning, IT experts held web-based seminars on how to gain optimal benefits from online applications and assist instructors in providing lectures in the most meaningful way. This trial phase was confusing for many instructors and students. While some instructors were uncomfortable with the impersonal nature of a screen and microphone, others had connectivity issues or were just uncertain about how to conduct lectures in an electronic environment. For students, there were numerous benefits, such as not having to travel to campus, being in class with illness and the choice to attend lectures when they deemed it fit (Iwai, 2020).

Certain students articulated their apprehensions regarding their economic welfare, the level of assistance received, and the apparent value of online studies. Some students questioned how certain practical classes could be offered remotely, such as photography and cinematography (The Canadian Press, 2020a). In spite of these concerns, a study conducted by Kahn et al. (2017) discovered positive links between the use of online learning, student involvement and meeting learning objectives. Dumford and Miller (2018) agree, stating that internet-based lectures facilitate shared learning between students.

The literature reviewed in Farnell et al. (2021) suggests that COVID-19 has inevitably brought about new risks and challenges that affect the access, study process and retention of students, particularly those coming from underrepresented, vulnerable, and disadvantaged groups. Even for students who still go on to study abroad, recent studies on student learning experiences during the COVID-19 pandemic have identified the following challenges faced by students. Challenges related to:

- studying conditions (i.e., access to a quiet place to study, equipment, reliable internet connection and course study materials, and confidence in using online platforms)
- funding (i.e., loss of employment/income, difficulty in meeting living costs and issues in receiving scholarships)
- well-being (i.e., lack of supportive social networks and prominent feelings of frustration, anxiety, and boredom with academic activities)

Methodology

Sample

Canada welcomed a total of 494,525 international students in 2017. British Columbia attracts 119,110 or 24% of international students. Vancouver, being the biggest city, has the lion's share in the province. This was the primary reason why Vancouver was chosen as the sample location. Self-completion questionnaires formed the basis of the data gathering, which was conducted in June 2020. To confirm the lucidity of the questions, 15 students took part in a pre-test (Diamantopoulos et al., 1994) but did not take part in the actual research study. Snowball sampling was used in getting respondents for this study. Snowball sampling was deemed appropriate since international students know other international students who may be their classmates, friends, or acquaintances ("Snowball Sampling," 2010). Researchers received a total of 117 fully completed questionnaires.

Instrument

The study utilized a validated and reliable researcher-made questionnaire. Based on the researchers' immigration stories and readings, they were able to design the survey questionnaire. The survey questionnaire was subdivided into 2 parts: Part 1 covers the profile of the respondents and Part 2 inquires about the different domains of COVID-19 experiences in the areas of Domain 1: On COVID-19 and Lockdown, Domain 2: Personal Experiences, Domain 3: Social Experiences, Domain 4: Health and Hygiene Experiences, Domain 5: Economic Experiences and Domain 6: Schooling Experiences. This survey tool was subjected to validity testing from 6 panels of experts which recorded a Lawshe's Content Validity Ratio (CVR) of 0.85 which is tantamount to establishing a good ability of the items used in the questionnaire to reflect the variables of the construct being measured. Likewise, an internal consistency Cronbach alpha score of 0.86 signifies that the items used in the study were consistently rated by the respondents 86 out 100 times if the same instrument shall be administered to them. The rundown of each domain reliability is shown as follows:

Table 1*Reliability Measures*

Reliability Measure	Cronbach	Interpretation
Instrument Overall Reliability Score	0.86	Good for Implementation
Domain 1: On COVID-19 and Lockdown	0.819	Good for Implementation
Domain 2: Personal Experiences	0.912	Good for Implementation
Domain 3: Social Experiences	0.791	Good for Implementation
Domain 4: Health and Hygiene Experiences	0.814	Good for Implementation
Domain 5: Economic Experiences	0.889	Good for Implementation
Domain 6: Schooling Experiences	0.912	Good for Implementation

Statistical Treatment of Data

The questionnaire used a 4-point Likert Scale represented as a range of 1-Strongly Disagree, 2-Disagree, 3- Agree, and 4- Strongly Agree. In this study, frequency and simple percentages were used to make sense of the respondents' demographic profiles. Weighted means were computed to determine the extent of perception of the students with respect to the different domains of experiences.

Moreover, Fisher's Exact Hypothesis Testing on Association was used to analyze the responses of the international students. The choice of the appropriateness of the statistical tool springs from the fact that Fisher's exact test is a statistical significance test used in the analysis of contingency tables represented by the profile of the students (column) and the extent of their experience (row) tested at 0.05 level of significance. In this hypothesis testing, if the p-value of the relationship is less than or equal to the level of significance (0.05), then there was a very high chance of rejecting the null hypothesis (*Ho: There is no significant association between the profile of the students and their extent of experience relative to covid-19*) and be freed from a Type 2 error. The researchers used Fisher's exact test since they wanted to know whether the proportions for one variable were different among values of the other variable (McDonald, 2014). Likewise, Fisher's Exact Test is nonparametric in the sense that it does not assume that the population is based on theoretical probability distributions. This is important to note because the selection of the respondents did not come from a probabilistic manner or random sampling since it is impossible to have a list of all the students and have all their contact information for the randomization. This study applied convenience sampling in gathering the responses where only available respondents and those who consented to participate in the study were included. Additionally, the assumption that "Each observation is mutually exclusive - in other words, each observation can only be classified in one cell" was also satisfied by the use of the statistical tool since the respondents can only choose uniquely one of the 4 options (*Strongly Agree to Strongly Disagree*) in the scale for each domain of experience.

Coding and Positionality

All data extracted from the survey were coded in Microsoft Excel. To uphold the anonymity of the identities of the respondents a coding mechanism for their names was instituted. Respondents were encoded in terms of their numbers (Respondent 1, 2, ...). Furthermore, the researchers were cognizant that they were immigrants themselves and may have similar experiences with the international students being new to Canada. These experiences have been the source for the researchers to come up with this study.

Preparation of the Data Collection Tool

The survey was administered fully online to adhere to the principles of safety and ethical considerations, especially during the pandemic. The online survey method involved using Google Forms, which has an automatic response collection system embedded in the program itself. Therefore, all data collected were automatically retrieved from the Google Form Response tab.

Results

Answers to the study questionnaires were charted, evaluated and assessed: the central objective being to depict the lived experiences of foreign students during the COVID-19 pandemic in Vancouver, BC, Canada. The survey represented a minimum of ten (10) nationalities, of which the majority (53% of respondents) were of Indian origin. Brazilian students constituted 14,5%, with smaller contributions from Nigerian, Russian, Iraqi and Taiwanese students.

From the outset, the number of female contributors ranked higher at 78%, while males made up the remaining 22%. When the survey was conducted, the majority of students were in the 26-30 age group, amounting to 46%. A large percentage of the students (57%) stated that they were unmarried, while those who were wedded, constituted 40,2% of total contributors. Over one quarter (25,6%) of these students had already been in Canada for 13-15 months by March 2020. Prior to the lockdown, most of the student participants had completed only a single semester at the university, while only a small amount had completed four terms by this point. Amidst the lockdown, 57% of respondents stated they were employed, while the remaining percentage claimed to be unemployed. Of those who were employed during this period, 61% specified that their establishments had work cutback arrangements in place and that it had directly or indirectly impacted on them. As far as

Table 2

The Level of Perceived Experience of International Students During the COVID-19 Lockdown (N = 117)

On COVID-19 and Lockdown	Weighted Mean	Standard Deviation	Description
I see COVID-19 virus as dangerous for all	3.49	0.92	Strongly Agree
I think COVID-19 is a hybrid of influenzas	2.47	1.26	Disagree
I don't understand the science of COVID-19	1.80	1.10	Disagree
You are in support that the lockdown implemented by governments was appropriate	3.44	0.91	Strongly Agree
Lockdown made you feel alienated from the world you are used too	2.86	1.12	Agree
Lockdowns globally took a serious impact on cross-border trades	3.62	0.71	Strongly Agree
Lockdown brought out the creation of the new normal to necessary groceries shopping	3.27	0.77	Strongly Agree
Factor Average	2.99	0.97	Agree
<i>3.25-4.00</i>	<i>Strongly Agree</i>		
<i>2.50-3.24</i>	<i>Agree</i>		
<i>1.75-2.49</i>	<i>Disagree</i>		
<i>1.00-1.74</i>	<i>Strongly Disagree</i>		

reduced work hours were concerned, a large percentage (40%) revealed that their billable hours had been reduced by between 1% to 25% as opposed to periods prior to the lockdown. In addition, 33% of students surveyed, revealed that their work hours had been reduced by at least 50% by the time lockdown was imposed. Some students (12%) opted not to disclose by what percentage their hours were cut back during this period. Those most affected by reduced hours were actively employed in the retail sector (38,89%) and food industry (32,41%), while the remainder were employed as caregivers, in hospitality, or the wellness sector.

Students were requested to give their opinion on the COVID-19 pandemic and whether a strict lockdown was really required. Most agreed strongly with the following statement: “*Lockdowns globally took a serious impact on cross boarder trades*” and seeing “*COVID-19 virus as dangerous for all*”.

In addition, students also stated that they were “*in support of the lockdown implemented by the governments and also deemed it appropriate*”. This is reflective of their COVID-related experiences as foreign students in Canada. Conversely, they disagreed about the belief that “*COVID-19 is a hybrid of influenzas*” and that they “*did not understand the science behind COVID-19*” (Table 2).

Table 3

Personal Experiences of International Students During the COVID-19 Lockdown (N = 117)

Personal Experiences	Weighted Mean	Standard Deviation	Description
Lockdown enhanced your technology skills rapidly	2.56	1.23	Agree
I felt isolated during the lockdown	2.72	1.22	Agree
I learned new skills that kept me entertained	2.50	1.18	Agree
I binge watched on my favorite movies, series, and other videos	2.63	1.26	Agree
I developed some form of anxiety or panic attacks	2.45	1.01	Disagree
I visited parks	2.17	0.98	Disagree
With more free time, I was able to develop personal plans	2.33	1.12	Disagree
With more free time, I became more reflective	2.53	1.09	Agree
Factor Average	2.49	1.14	Disagree
	<i>3.25-4.00</i>		<i>Strongly Agree</i>
	<i>2.50-3.24</i>		<i>Agree</i>
	<i>1.75-2.49</i>		<i>Disagree</i>
	<i>1.00-1.74</i>		<i>Strongly Disagree</i>

The survey results suggest that many of the students felt isolated during the lockdown. Respondents claimed they spent their free time “*binge watching their favorite movies, series and other videos*”. Similarly, they acknowledged that with more free time, they became more reflective.

In contrast, many revealed that they didn’t relate to “*giving in to anxiety or panic, developing personal plans and visiting parks*” as part of their lives as foreign students in Canada (Table 3).

As far as the social aspect of the quarantine period was concerned, respondents agreed that “*I got to spend more time online with my family and friends back home*”, but were in strong disagreement that they “*met new friends*”.

Table 4*Social Experiences of International Students During the COVID-19 Lockdown (N = 117)*

Social Experiences	Weighted Mean	Standard Deviation	Description
I developed more meaningful relationships	2.39	1.19	Disagree
I got to spend more time online with my family and friends back home	2.91	1.07	Agree
I met new friends	1.71	0.78	Strongly Disagree
Attended small gatherings	1.83	0.84	Disagree
I went out of my apartment just to see/watch other people	1.98	0.93	Disagree
I was excited to do my grocery shopping because I will see a lot of people	1.97	1.03	Disagree
I enjoyed the small talks I had with strangers when out in public	1.96	1.05	Disagree
Factor Average	2.11	0.98	Disagree
<i>3.25-4.00</i>	<i>Strongly Agree</i>		
<i>2.50-3.24</i>	<i>Agree</i>		
<i>1.75-2.49</i>	<i>Disagree</i>		
<i>1.00-1.74</i>	<i>Strongly Disagree</i>		

Students denied having “*attended small gatherings*” or left their homes “*purely to see/watch other people*”, were not enthusiastic about “*doing their weekly shopping to see a lot of people*” and did not like to partake in “*small talk with strangers when they were out in public*” (Table 4).

When probed about their wellness and sanitation practices during this time, students emphasized that they washed or sanitized their hands where possible, refrained from touching their faces, all types of physical exchange, wore masks and maintained appropriate distances in public areas. In addition, students claimed to have followed government recommended guidelines regarding washing hands for at least 20 seconds. Consequently, they concluded that they’d “not fallen ill for the duration of the lockdown”. They also revealed their disagreement with some health and sanitizing recommendations at this time. Many did not agree that they should be wearing a mask if they were more than six feet away from another person. By this time, they had already stopped all forms of exercise. Furthermore, they indicated that they did not like being isolated from people and did not deem home-based work to be a safer option (Table 5).

Table 5*Health and Hygiene Experiences of International Students During the COVID-19 Lockdown (N = 117)*

Health and Hygiene Experiences	Weighted Mean	Standard Deviation	Description
I kept my distance every time I am in public	3.49	0.68	Strongly Agree
I wore masks and other protective gears	3.29	0.98	Strongly Agree
I don’t think masks are necessary if I am socially distancing 2 meters away	1.97	0.89	Disagree

Health and Hygiene Experiences	Weighted Mean	Standard Deviation	Description
I like to have a mask on for 8 hours a day when I work	2.51	1.26	Agree
I refused to meet with friends in person	2.58	1.18	Agree
I continued to jog and do other physical activities	2.37	1.05	Disagree
I felt unsafe every time I go to work.	2.57	1.30	Agree
I felt vulnerable every time I go out in public	2.64	1.13	Agree
My employer has put safety measures to protect its workers	2.95	1.26	Agree
COVID-19 made me practice more personal hygiene	3.36	0.77	Strongly Agree
I followed all protocols of the government communications for washing my hands for 20 seconds	3.34	0.97	Strongly Agree
I sanitized my hands where possible	3.60	0.54	Strongly Agree
I avoid touching my mouth, eyes, and nose when I am outside my home	3.51	0.76	Strongly Agree
I avoid hugs and all forms of human physical contact	3.47	0.77	Strongly Agree
I enjoyed alienating myself from society	2.05	1.16	Disagree
I believed all information shared to me by the government and health authorities	2.97	1.09	Agree
I am more healthy working from home	2.12	1.35	Disagree
I have not fallen ill for the duration of the lockdown	3.34	0.92	Strongly Agree
I have time to exercise at home	2.77	1.12	Agree
Factor Average	2.89	1.01	Agree

<i>3.25-4.00</i>	<i>Strongly Agree</i>
<i>2.50-3.24</i>	<i>Agree</i>
<i>1.75-2.49</i>	<i>Disagree</i>
<i>1.00-1.74</i>	<i>Strongly Disagree</i>

Students were very concerned about their day-to-day expenses in Vancouver. Post-graduation work opportunities represented a major concern for these students. Many had doubts about being able to pay tuition fees, especially since the imposed lockdown necessitated the use of technology to buy essential items. The respondents refuted that they “*welcomed lay-off to collect financial stimulus aid from government*” and that their bank balances were higher during the lockdown. Student loans, credit card and other expenses were delayed and many professed to have taken on two jobs (Table 6).

Table 6*Economic Experiences of International Students During the COVID-19 Lockdown (N = 117)*

Economic Experiences	Weighted Mean	Standard Deviation	Description
Lockdown increased the use of technology for shopping necessities	3.02	1.04	Agree
I voluntarily declined work hours for safety reasons	2.09	1.18	Disagree
I worried on my living expenses here	3.37	0.92	Strongly Agree
I embraced lay off to collect government financial aid help stimulus	1.64	1.19	Strongly Disagree
I worried if I could afford to complete my studies	2.92	1.19	Agree
I was anxious whether I can return to work before my funds run out	2.51	1.43	Agree
I have more money during lockdown	1.64	0.86	Strongly Disagree
My spending habits changed	2.94	1.11	Agree
I was forced to do cost-cutting measures	2.97	1.13	Agree
I was wary of my employment opportunities after graduation	3.21	1.14	Agree
My family's financial support decreased	2.52	1.34	Agree
I needed to send money back home to support my family	1.91	1.24	Disagree
Loan payments were deferred	1.39	1.36	Strongly Disagree
Credit card payments were deferred	1.76	1.29	Disagree
Rent payment was deferred	1.70	1.19	Strongly Disagree
I have at least 2 jobs now	1.60	0.86	Strongly Disagree
Factor Average	2.32	1.15	Disagree
	<i>3.25-4.00</i>		<i>Strongly Agree</i>
	<i>2.50-3.24</i>		<i>Agree</i>
	<i>1.75-2.49</i>		<i>Disagree</i>
	<i>1.00-1.74</i>		<i>Strongly Disagree</i>

Regarding academic progress, students made it clear that “*instructors maintained consistent classes through online platforms*”. Students conceded that guidelines to simplify the transition from in-person learning to an online modality were sufficient, the institutions communicated COVID-19-related updates prior to quarantine, and course work was placed on the web or emailed, and students completed tasks with negligible oversight from instructors. Most did not report any noteworthy technical issues while transitioning to online learning but maintained that team assignments were not easy to

coordinate in an online setting and added that paying tuition fees presented an obstacle. Furthermore, students felt they had a raw deal studying online as opposed to in-person tuition (Table 7).

Table 7

Schooling Experiences of International Students During the COVID-19 Lockdown (N = 117)

Academic Experiences	Weighted Mean	Standard Deviation	Description
The university/college regularly sent communications/updates on Covid-19 prior to the lockdown	3.04	1.00	Agree
There were sufficient guidelines that instructed the students on the shift of the mode of instruction from face-to-face to online mode	2.91	1.07	Agree
I had technical problems shifting to online classes	2.40	1.08	Disagree
I received technical support from the university/college	2.21	1.29	Disagree
My professors held regular on-line classes	3.47	0.80	Strongly Agree
It was challenging for me to have an appointment with my professor	2.03	1.09	Disagree
Course works were posted on the web or emailed, and I independently worked on them with minimal faculty supervision	2.61	1.17	Agree
I felt short-changed with online compared with face-to-face classes.	2.54	1.17	Agree
Group and team projects were difficult to do in an online class	3.25	0.96	Agree
I did other things while my professors were holding an online class	1.72	1.02	Strongly Disagree
Quizzes and examinations were a lot easier in an online mode	1.84	1.17	Disagree
Payment of school fees was difficult	3.13	1.24	Agree
Transactions with university/college service offices were usually delayed during the lockdown	2.58	1.38	Agree
Registration was more challenging since I could not personally appeal to authorities for consideration	2.09	1.30	Disagree
I experienced more learning online than face-to-face studies	1.76	1.22	Disagree
I found that there was extensive research to undertake to study for my courses	2.46	1.45	Disagree
My professors were present with the use of other technological apps	2.37	1.26	Disagree
I availed of online counseling service of the college/university during the lockdown	1.70	1.29	Strongly Disagree
Factor Average	2.45	1.17	Strongly Disagree
	<i>3.25-4.00</i>	<i>Strongly Agree</i>	
	<i>2.50-3.24</i>	<i>Agree</i>	
	<i>1.75-2.49</i>	<i>Disagree</i>	
	<i>1.00-1.74</i>	<i>Strongly Disagree</i>	

Table 8

Profile	Personal	Social	Health & Higene	Economic	Academic
Nationality	0.623	0.000*	0.003*	0.001*	0.356
Sex	0.676	0.547	0.380	0.104	0.048
Age	0.280	0.589	0.980	0.227	0.363
Marital Status	0.389	0.359	0.993	0.442	0.138
Length of Stay	0.050*	0.203	0.763	0.104	0.111
Terms Completed	0.090	0.612	0.494	0.213	0.912
Work Status	0.213	0.110	0.912	0.077	0.000*
Industry of Work	0.000*	0.000*	0.000*	0.001*	0.000*

**Fisher's Exact Test of Association is significant at p-values less than or equal the level of significance at 0.05*

The researchers were also keen to find out if students' demographic profile and line of work were linked to their perceived experiences of the lockdown. It was evident that their level of employment was directly related to their varying experiences as far as their studies were concerned. Finally, the sectors of foreign students were employed in, were markedly connected to each level of experience portrayed. This means that the trades these students were employed in, largely influenced their financial, personal and wellbeing perspectives (Table 8).

Discussion

The world was by no means prepared for the COVID-19 onslaught, more specifically, the lasting effects it would have and the element of uncertainty it posed. The most significant lifestyle adaptations were seen in education and employment. In particular, tertiary institutions were forced to implement emergency procedures to continue education as far as possible in an attempt not to defer semesters. For international students in particular, the pandemic posed additional challenges.

The objective of this study was to find out what the personal, health, wellbeing and financial experiences of foreign students were in Vancouver, Canada during this period, the level and quality of education they received, and the related difficulties they faced. The results would prove invaluable in measuring the extent of these experiences and developing efficient and improved alternative instruction methods as well as suitable government interventions for international students in case of a similar pandemic or emergent situations.

Based on these findings, many students came from lower income families and were forced to work in order to fund studies and lifestyle expenses, while some had the additional responsibility of sending money home to their families. A large percentage agreed that financial assistance from families also decreased during this time.

While these challenges were compounded by feelings of loneliness or isolation, foreign students in Vancouver complied with regulations, believed in the value of lockdowns, but disagreed about voluntarily declining work hours for safety reasons.

These findings are significant for the field of comparative and higher education for several reasons:

1. Emergency preparedness. Higher education will likely be able to adapt to any future threat, based on the lessons learnt from COVID-19. Universities are suitably prepared, and faculty trained to shift classes online if the need arises. This research shows that it is possible, though not ideal, to continue lectures online for extended periods.
2. International students are bound by the laws of the country they study in but chose to willingly comply with all lockdown regulations in Vancouver, demonstrating that foreign students were not willing to risk having their study visas revoked through non-compliant behavior.
3. The Canadian government accommodated the needs of foreign students, suitably adapting visa regulations where required, eliminating the need for students to travel and study online from their home countries while in lockdown. This

somewhat simplified the lives of students who were anxious about paying tuition fees and completing their studies with valid permits.

4. Foreign students played a significant role in providing essential services through their employment in retail and other sectors during the pandemic, contributing to the BC province's economy and the welfare of others.

5. Tuition fees are significantly higher for foreign students in Vancouver but constitute a significant source of sustainable income for Canadian tertiary institutions and associated employment of staff and faculty. Retaining international students throughout the pandemic meant that the business aspect of education could continue while offering an acceptable level of instruction.

Conclusion

Foreign students had a solid grasp of the potential risks COVID-19 posed and accepted the associated lockdown requirements. A common consequence was that students felt lonely. To further prevent the feelings of isolation, respondents stayed in touch with relatives from around the globe, through social media platforms. Their sanitizing routines were influenced by the guidelines issued by the BC Provincial government's health officials. Foreign students were duly concerned about their prevailing lifestyles and futures in Vancouver, BC, predominantly as a result of threats to their sustained employment, but also the probable lasting consequences the virus posed to the BC labor market. Overall, students easily transitioned from in-person to online learning, though they faced challenges such as completing team assignments and tuition payments. The survey results indicated that the students' nationality played a vital role in their perception of their financial health and well-being. In addition, their length of stay in Vancouver determined their lived experience. Being actively employed or unemployed presented a gauge for the variations in how students experienced their academic studies. Finally, the trade or industry in which foreign students worked, impacted heavily on their social wellbeing, financial experiences, and overall wellness.

Students' personal experiences related directly to insecurities regarding accommodation, payment of tuition and managing a rigorous academic schedule. Deciding to remain in Canada or return home seemed to be a life-altering decision for many with devastating potential consequences. In terms of social experiences, students complied with directives to isolate, keep their distance and saw the reasoning behind the regulations. Academically, foreign students easily adapted to online learning with minimal difficulty, transitioned swiftly and managed to continue academic studies from the comfort of their homes, apart from the perceived feeling of diminished value obtained from e-learning as opposed to in-person. Predictably, the largest overall concern for foreign students were issues related to employment, job security and future earnings. Many viewed themselves as ranking lowest in the pecking order, fearing that they may be the first casualties to be made redundant in the case of an economic downturn. Finally, from a health and hygiene perspective, students adhered to sanitizing protocols and claimed not to have contracted COVID-19 during the lockdown period or require medical intervention. While the sample of foreign students was in Vancouver, BC, Canada, their experiences can by no means be described as unique and similarly, international students across the globe may have had comparable experiences, however, Canada seemingly assisted where possible by changing work and study regulations to accommodate their needs.

References

- Alam, H. (2020, May 30). International students worry about pandemic as decisions loom on travel to Canada. *CTV News*. <https://www.ctvnews.ca/health/coronavirus/international-students-worry-about-pandemic-as-decisions-loom-on-travel-to-canada-1.4961689>
- Al-Oraibi, A., Fothergill, L., Yildirim, M., Knight, H., Carlisle, S., O'Connor, M., Briggs, L., Morling, J.R., Corner, J., Ball, J.K., Denning, C., Vedhara, K., Blake, H. (2022). Exploring the Psychological Impacts of COVID-19 Social Restrictions on International University Students: A Qualitative Study. *International Journal of Environmental Research and Public Health*, 19(13), 7631. <https://doi.org/10.3390/ijerph19137631>
- Apart. Not alone.* (2020, August 3). CAMH. <https://www.camh.ca/en/health-info/mental-health-and-covid-19>
- Belle, T. (2020, Mar 27). Studying in Canada during COVID-19: I' am on board to finish this semester remotely. *Study International*. <https://www.studyinternational.com/news/international-students-in-covid-19-canada/>
- Bula, F. & Xu, X. (2020, April 3). B.C. international students left out of aid fund. *The Globe and Mail*. <https://www.theglobeandmail.com/canada/british-columbia/article-bc-international-students-left-out-of-aid-fund/>
- Canada: Some Int'l Students Eligible for Support.* (2020, April 3) . The Pie News. <https://thepienews.com/news/some-international-students-eligible-for-support-in-canada/>
- Canadian Bureau of International Education. (2020). *International students in Canada*. <https://cbie.ca/wp-content/uploads/2018/09/International-Students-in-Canada-ENG.pdf>

- Canadian Press. (2020, March 25). A look at what's in the federal COVID-19 aid legislation. *CityNews Ottawa*. <https://ottawa.citynews.ca/national-news/a-look-at-whats-in-the-federal-covid-19-aid-legislation-2199638>
- Crawford & Johnson. (2020). COVID-19: Doctors push for lockdown, warn B.C. could become like Italy. *Vancouver Sun*. <https://vancouver.sun.com/news/covid-19-doctors-urge-b-c-government-to-take-more-drastic-measures/>
- Dangerfield, K. (2020, July 9). Coronavirus: How a lack of socialization could impact a generation of kids. *Global News*. <https://globalnews.ca/news/7156863/coronavirus-children-isolation-socialization/>
- Diamantopoulos, A., Reynolds, N., & Schlegelmilch, B. (1994). Pretesting in questionnaire design: The impact of respondent characteristics on error detection. *Journal of the Market Research Society*, 36(4), 295–313. <https://doi.org/10.1177/147078539403600402>
- Dumford, A., & Miller, A. (2018). Online learning in higher education: exploring advantages and disadvantages for engagement. *Journal of Computing in Higher Education*, 30, 452–465. <https://doi.org/10.1007/s12528-018-9179-z>
- Ebrahim, N. (2020, March 20). How Canadian universities and colleges are responding to Coronavirus. *Refinery29*. <https://www.refinery29.com/en-ca/2020/03/9548653/canadian-university-college-closures-coronavirus>
- El-Assal, K. & Thevenot, S. (2020, April 8). International students now eligible for PGWP with online courses. *CIC News*. <https://www.cicnews.com/2020/04/international-students-now-eligible-for-pgwp-with-online-courses-0414082.html#gs.rakrsr>
- Farnell, T., Skledar Matijevic, A., & Scukanec Schmidt, N. (2021, March 17). The Impact of COVID-19 on Higher Education: A review of Emerging Evidence. Analytical Report. *European Commission*. <https://op.europa.eu/en/publication-detail/-/publication/876ce591-87a0-11eb-ac4c-01aa75ed71a1/language-en>
- Ghebreyesus, T., & Urpilainen, J. (n.d.). Opinion: The COVID-19 pandemic is the defining health crisis of our time. *Deutsche Welle*. <https://www.dw.com/en/opinion-the-covid-19-pandemic-is-the-defining-health-crisis-of-our-time/a-53452278>
- Gomez, C., Kalata, N., Singh, I., & Loiero, J. (2020, March 24). International students feeling isolated and financially strapped as they wait out pandemic. *CBC News*. <https://www.cbc.ca/news/canada/covid-international-students-universities-pandemic-1.5505222>
- Government of Canada. (2020a, March 25). *Government introduces Canada Emergency Response Benefit to help workers and businesses*. <https://www.canada.ca/en/departement-finance/news/2020/03/introduces-canada-emergency-response-benefit-to-help-workers-and-businesses.html>
- Government of Canada. (2020b, April 22). *Removing barriers for international students working in essential services to fight COVID-19*. <https://www.canada.ca/en/immigration-refugees-citizenship/news/2020/04/removing-barriers-for-international-students-working-in-essential-services-to-fight-covid-19.html>
- Government of Canada. (2020c, July 14). *Measures to support international students during COVID-19 pandemic*. <https://www.canada.ca/en/immigration-refugees-citizenship/news/2020/07/measures-to-support-international-students-during-the-covid-19-pandemic.html>
- Economic Impact*. (n.d.). Vancouver Economic Commission. <https://vancouvereconomic.com/economic-impact/>
- Holliday, I. (2020, April 16). B.C. announces 3 more COVID-19 deaths, 14 new cases. *CTV News*. <https://vancouverisland.ctvnews.ca/b-c-announces-3-more-covid-19-deaths-14-new-cases-1.4899158>
- Iwai, Y. (2020, March 13). Online Learning during the COVID-19 Pandemic. *Scientific American*. <https://blogs.scientificamerican.com/observations/online-learning-during-the-covid-19-pandemic/>
- Kahn, P., Everington, L., Kelm, K., Reid, I., & Watkins, F. (2017). Understanding student engagement in online learning environments: the role of reflexivity. *Educational Technology Research and Development*, 65, 203–2018. <https://doi.org/10.1007/s11423-016-9484-z>
- MacLeod, M. (2020, June 15). Is the great shift to working from home here to stay? *CTV News*. <https://www.ctvnews.ca/health/coronavirus/is-the-great-shift-to-working-from-home-here-to-stay-1.4981456>
- McDonald, J. H. (2014). *Biological statistics Third Edition*. Retrieved from <http://www.biostathandbook.com/HandbookBioStatThird.pdf>
- Mangione, K. (2020a, March 17). All B.C. public schools will be closed for now over COVID-19 concerns. *CTV News*. <https://bc.ctvnews.ca/all-b-c-public-schools-will-be-closed-for-now-over-covid-19-concerns-1.4856680>
- Mangione, K. (2020b, June 17). These groups were the hardest hit by the coronavirus pandemic, B.C.'s finance minister says. *CTV News*. <https://bc.ctvnews.ca/these-groups-were-the-hardest-hit-by-the-coronavirus-pandemic-bc-s-finance-minister-says-1.4988852>
- Maragakis, L. (2020, July 5). Coronavirus, social and physical distancing and self-quarantine. *John Hopkins Medicine*. <https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus/coronavirus-social-distancing-and-self-quarantine>
- McQuigge, M. (2020, March 11). Universities prepare for possibility of moving online as coronavirus pandemic spreads. *The Globe and Mail*. <https://www.theglobeandmail.com/canada/article-universities-prepare-for-possibility-of-moving-online-as-coronavirus/>

- Mineo, L. (2020, March 5). How to reduce the spread of coronavirus: Much of it follows traditional cold-season admonitions, but some is more specific. *Harvard Gazette*. <https://news.harvard.edu/gazette/story/2020/03/preventing-the-spread-of-coronavirus-starts-with-basic-hygiene/>
- MIT Medical. (n.d.). *Four ways to protect yourself and others from COVID-19*. <https://medical.mit.edu/four-ways-to-protect>
- Rethinking social change in the face of coronavirus*. (n.d.). Stanford Social Innovation Review. <https://ssir.org/rethinking-social-change-in-the-face-of-coronavirus>
- Snowball Sampling*. (2010, September 10). Oregon State University. <https://research.oregonstate.edu/irb/policies-and-guidance-investigators/guidance/snowball-sampling>
- Student life in Canada*. (2021, September 29). Leverage Edu. <https://leverageedu.com/blog/student-life-in-canada/>
- Shaw, R. (2020, March 25). COVID-19: Job losses mount in B.C. as coronavirus pandemic wreaks economic havoc. *Vancouver Sun*. <https://vancouver.sun.com/news/local-news/covid-19-job-losses-mount-in-b-c-as-coronavirus-pandemic-wreaks-economic-havoc>
- St. Denis, J. (2020, June 26). Protesters march against COVID-19 prevention measures in Vancouver. *CTV News*. <https://bc.ctvnews.ca/protesters-march-against-covid-19-prevention-measures-in-vancouver-1.4912767>
- Steady, L. (2020, March 15). COVID-19-related changes, cancellations at Lower Mainland post-secondary schools. *City News Everywhere*. <https://www.citynews1130.com/2020/03/15/covid-19-changes-post-secondary/>
- Teboc, C. (2020, April 14). How to improve your social life while COVID-19 social distancing. *Maine News Center*. <https://www.newscentermaine.com/article/news/local/as-seen-on-tv/video-call-etiquette-during-coronavirus-pandemic-social-distancing/97-8d861b37-749a-477e-bd11-c0bb893f2dae>
- The Canadian Press. (2020a, May 12). Some Canadian universities say fall classes will be offered primarily online. *CBC News*. <https://www.cbc.ca/news/canada/covid-universities-online-1.5565810#:~:text=CBC%20News%20Loaded,Some%20Canadian%20universities%20say%20fall%20classes%20will%20be%20offered%20primarily,the%20COVID%20D19%20pandemic%20continues.>
- The Canadian Press. (2020b, July 24). Online shopping has doubled during the pandemic, Statistics Canada says social sharing. *CBC News*. <https://www.cbc.ca/news/business/onlineshopping-covid-19-1.5661818>
- The U.S. Centers for Disease Control and Prevention. (2020a, July 30). *COVID-19 recommendations for older adults*. <https://www.cdc.gov/aging/covid19-guidance.html>
- The U.S. Centers for Disease Control and Prevention. (2020b, July 15). *Social distancing keep a safe distance to slow the spread*. <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>
- United Nations Department of Economic and Social Affairs Social Inclusion. (n.d.). Everyone included: Social Impact of Covid-19. *United Nations*. <https://www.un.org/development/desa/dspd/everyone-included-covid-19.html>
- Economic Impact*. (n.d.). Vancouver Economic Commission. <https://vancouvereconomic.com/economic-impact/>
- Vega, D. (2020, March 26). Student life. *Indiana University School of Medicine*. <https://medicine.iu.edu/blogs/student-life/i-am-not-invincible-my-covid-19-story>
- Zhao, T. (2020, March 27). International perspective: a Chinese student in Canada during the coronavirus outbreak. *The Student: Part Times Higher Education*. <https://www.timeshighereducation.com/student/blogs/international-perspective-chinese-student-canada-during-coronavirus-outbreak>
- Zussman, R. (2020, March 18). B.C. declares state of emergency in response to coronavirus pandemic. *Global News*. <https://globalnews.ca/news/6697149/public-safety-minister-update-coronavirus/>

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