

Mental Well-Being of Indian Immigrants with Temporary Visas Working in Retail Industries during and after COVID-19 in Auckland, New Zealand: Analysis Based on WHO-5 Test

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ARTICLE INFO



Received: 14 Mar 2024

Accepted: 03 Apr 2024

Published: 12 Apr 2024

Cite this article as:

Kaur, P., Omisakin, O., & Kularatne, I. (2024). Mental Well-Being of Indian Immigrants with Temporary Visas Working in Retail Industries during and after COVID-19 in Auckland, New Zealand: Analysis Based on WHO-5 Test. *International Journal of Research in Business Studies and Management*, 11(1), 1-12.

DOI: <https://doi.org/10.62557/2394-5931.110101>

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ABSTRACT

This research examines the mental well-being of Indian immigrants with temporary visas working in retail industries in Auckland, New Zealand, during and after COVID-19. The research focused on immigrants on work visas for full-time employment and immigrants on work visas for full-time employment who were laid off and returned to study on student visas to upgrade their skills and align with the new prerequisites of the New Zealand job market. A mixed-method research approach was employed, utilising the World Health Organization Well-Being Index 5 (WHO-5) to assess the mental well-being of Indian immigrants with temporary visas during and after COVID-19. The research showed that 48.57% of participants with work visas experienced low mental well-being due to COVID-19, whereas 80% of participants with student visas experienced low mental well-being due to COVID-19. Besides, this research revealed that changes to immigration rules, job uncertainty, and being unable to visit family members because of strict border constraints were the primary causes of low mental well-being during and after COVID-19 among participants. A significant number of participants with student visas experienced lower mental well-being during and after COVID-19 than participants with work visas.

KEYWORDS: COVID-19, Indian immigrants, Work visa, Student visa, World Health Organization Well-Being Index 5 (WHO-5) test.

INTRODUCTION

The Black Death, known as the Plague pandemic in the 14th century (Grácio & Grácio, 2017), the Influenza Pandemic of 1918, also known as the Spanish Flu (Flecknoe et al., 2018), and the Swine flu pandemic of 2009-10 (Hilton & Hunt, 2011; Klemm et al., 2016) are a few pandemics that had substantial consequences on global health and society. COVID-19 has been identified as the deadliest pandemic of the twenty-first century (Singhal, 2020). New Zealand businesses, particularly those in retail, tourism, and hospitality, along with other small businesses, were adversely impacted by the country's strict lockdown and stringent border closure constraints due to COVID-19 (Baum et al., 2020; Belong Aotearoa, 2020; Every-Palmer et al., 2020; New Zealand Government, 2022; Robson, 2021). Some employees were laid off, while others had their hours reduced due to the negative impacts of COVID-19 on

businesses, leading to stress and low mental well-being (Belong Aotearoa, 2020; Every-Palmer et al., 2020; Rodríguez-Rey et al., 2020). The physical and mental well-being of people in New Zealand, including citizens, permanent residents, and temporary visa holders, such as those on work and student visas, were adversely impacted by the COVID-19 pandemic.

Physical well-being refers to being in a state of good health, strength, and competence (Nelis et al., 2011). The willingness and ability of a human being to navigate both the positive and negative aspects of their lives is known as mental well-being (Przybylski & Weinstein, 2017). According to Xiao et al. (2021), a human's physical and mental well-being can exhibit positive or negative aspects. A healthy, capable, and disease-free body and mind are characteristics of positive physical and mental well-being; in contrast, a diseased, incompetent, and unwell body and mind are

characteristics of negative physical and mental well-being (Conversano et al., 2010; Xiao et al., 2021). This study investigates the mental well-being of Indian immigrants holding work visas and employed in the retail industry of Auckland, New Zealand, both during and after the COVID-19 pandemic. Additionally, the research delves into the mental well-being of Indian students working with student visas previously engaged in Auckland's retail industry, who faced job layoffs and pursued additional education to enhance their skills in response to evolving job market demands.

The research objectives are outlined as follows:

1. To determine the mental well-being of Indian immigrants with work visas working in the retail industry during and after COVID-19.
2. To determine the mental well-being of Indian students working with student visas in the retail industry who were made redundant during COVID-19 and went through additional education to enhance their skills in response to evolving job market demands.

This study addressed the following research questions to achieve the objectives mentioned above:

1. What is the mental well-being of Indian immigrants with work visas working in the retail industry during and after COVID-19?
2. What is the mental well-being of Indian students working with student visas in the retail industry who were made redundant during COVID-19 and went through additional education to enhance their skills in response to evolving job market demands?

LITERATURE REVIEW

Immigrants showed signs of being more susceptible than permanent residents and citizens to employment losses during past crises, for example, the global financial crisis 2009 (Awad, 2009). The closure of workplaces could lead to irregularities in countries in which an employee's immigration status is connected to their employment rank and the company (Guadagno, 2020). The impact of COVID-19-induced employment termination or reduced income stemming from shortened work hours might hinder immigrants from renewing their permits to work (Guadagno, 2020; International Labour Organization, 2021). COVID-19 had led to prolonged immigration processes, causing delays in visa processing for those already working in the USA (Sabri et al., 2020). Consequently, many immigrants on temporary visas expressed concerns about potential job loss if they could not obtain a new work visa within the designated timeframe (Sabri et al., 2020). The study also revealed instances of immigrants losing employment due to the COVID-19 pandemic, exacerbating concerns about job security (Sabri et al., 2020). Consequently, immigrants holding work visas

experienced apprehension about their economic well-being, posing challenges for their families in meeting essential necessities such as housing and food expenses (Sabri et al., 2020). The conflicts arising from COVID-19, particularly impacting immigrants with valid visas, ultimately led to increased psychological distress and lowered mental well-being among immigrants (Cénat et al., 2020; Fairlie, 2020). Besides, Lippens et al. (2021) discovered a majority of the respondents expressed worry about potential job losses and missed opportunities for promotions that they would have attained had it not been for the occurrence of COVID-19. Additionally, Campbell (2020) stated that layoffs, lower earnings, insufficient assets, and a lack of support from others were identified as contributors to psychological distress and lower mental well-being, which would be exacerbated if business closures due to COVID-19 persisted.

Several studies concluded that the significant consequences of the COVID-19 pandemic negatively impacted the mental well-being of international students (Alaklabi et al., 2021; Alam et al., 2021; Xu, 2021). Xu (2021), stated that psychological distress and low mental well-being were observed in international students in China during COVID-19 that were influenced by internal factors, including learning behaviour regarding online classes and values, and external factors, including strict lockdown rules, social isolation, and a lack of social assistance. The reduction in student welfare programs, including healthcare services, by educational institutions exacerbated international students situation in the USA, leading to low mental well-being (Alaklabi et al., 2021). Numerous international students faced significant financial burdens due to these circumstances, rendering it challenging to afford essential items, for example, food (Alaklabi et al., 2021).

The COVID-19 pandemic led to job insecurity in Australia due to stringent restrictions, layoffs, and changes in immigration rules (Askola et al., 2021; Berg et al., 2020). Employees with temporary visas who held insecure jobs, such as those in the retail and hospitality industries, were particularly vulnerable. Dodd et al. (2021) observed a substantial influence of COVID-19 on the employment of over 50% of the 787 university student participants in Australia, encompassing both domestic and international students. The pandemic presented a severe challenge, particularly for international students in Australia who lacked secure employment to meet their essential needs including food and rent (Berg et al., 2020; Dodd et al., 2021). The study showed that Australian students, both international and domestic, encountered psychological distress and low mental well-being related to studying online due to COVID-19, mainly relating to the difficulty of communicating with their lecturers (Dodd et al., 2021).

Organisation for Economic Co-operation and Development (2020) discovered that immigrants' risk of contracting COVID-19 infection was at least twice as high as that of native-born residents of Southern European countries and the United States due to overcrowded housing and a substantial number of people in employment where physical separation was not possible. Immigrants were more susceptible to labour market changes because of their often-non-permanent employment positions and lower job status (Organisation for Economic Co-operation and Development, 2020). Therefore, their everyday lives were affected, and they experienced low mental well-being due to job loss or worry about job loss, working shorter hours, and concern about contracting COVID-19 (Pietrabissa & Simpson, 2020; Srivastava et al., 2021). The detrimental influence on immigrants' employment was made worse by the fact that immigrants are disproportionately represented in the retail and hospitality sectors, which have been among those most severely impacted by the COVID-19 pandemic so far (Baum et al., 2020; Organisation for Economic Co-operation and Development, 2020; Rodríguez-López et al., 2021).

In contrast to the findings of the studies mentioned above, which show that a large percentage of immigrants work in the sectors most affected by the COVID-19 pandemic, Bui et al. (2021) in Vietnam and Koh (2020) in Singapore discovered during their research that this susceptibility stemmed not only from job losses but also from inadequate housing conditions for immigrants with low-skilled work visas. Low-skilled immigrant workers frequently stayed in dormitories, challenging them to uphold adequate social distancing in shared rooms and communal facilities such as kitchens, dining areas, recreational facilities, and restrooms (Bui et al., 2021; Koh, 2020).

Job loss is frequently mentioned as a factor resulting in detrimental psychological impacts (Liem & Liem, 1988; Tang et al., 2007). According to Liem and Liem (1988), people without employment exhibit notably reduced levels of happiness and more depression than people with jobs. Further, Liem and Liem (1988) stated that the psychological distress and low mental well-being experienced by unemployed individuals increase over time. This means that immigrants, especially those on temporary visas, may be vulnerable to adverse psychological effects due to job losses caused by COVID-19 (Cénat et al., 2020). Serafini et al. (2021) found that losing one's job can negatively impact mental well-being, and that the COVID-19 pandemic had made many susceptible to psychological distress and low mental well-being. Several studies indicated that COVID-19-related job insecurity is associated with psychological distress and low mental well-being

(Basyouni & El Keshky, 2021; Rajani et al., 2016; Sarwar et al., 2021; Wilson et al., 2020). According to studies conducted in New Zealand, people who experienced a substantial reduction in income because of the COVID-19 pandemic were likely facing financial challenges and might be experiencing psychological distress and low mental well-being (Anderson et al., 2020; *Belong Aotearoa*, 2020; Every-Palmer et al., 2020). Additionally, people who experienced job or business loss and did not have immediate alternatives might encounter psychological distress and low mental well-being due to the loss of emotional assistance, financial difficulties, and a decrease in status (Anderson et al., 2020; *Belong Aotearoa*, 2020).

Various studies indicated that the mental well-being of immigrants had been negatively affected by job losses caused by COVID-19 (Anderson et al., 2020; Basyouni & El Keshky, 2021; Every-Palmer et al., 2020; Serafini et al., 2021). In contrast, aside from job loss, other factors were linked to the low mental well-being experienced by immigrants holding temporary visas. Song and McDonald (2021) found that registered Chinese nurses faced several challenges during the COVID-19 pandemic in New Zealand: 47.06% of those who participated in their study showed they experienced adverse job incidents such as workplace harassment, discrimination based on race, and criticism. The negative experiences that nurse faced during COVID-19 might have caused them psychological distress and low mental well-being (Labrague & Santos, 2020; Master et al., 2020; World Health Organization, 2020).

Furthermore, various studies suggested that hotels, air travel, and specific kinds of retail businesses, especially those not related to food, were expected to experience sustained business declines (Koch et al., 2021; Mauro & Syverson, 2020; Sarwar et al., 2021; Spurk & Straub, 2020; Youssef et al., 2020). Thus, the requirement for employees in these businesses decreased, making it challenging to estimate when such businesses would rebound and the need for workers would rise again (Mauro & Syverson, 2020; Spurk & Straub, 2020). However, to mitigate the effects of COVID-19, several hotels provided food delivery services to customers in their homes. This practice aimed to sustain their business, avoid layoffs, and maintain productivity among their staff (Sarwar et al., 2021). On the other hand, healthcare and IT experienced a significant increase in demand during the COVID-19 pandemic, demonstrating significant growth in the need for employees (Mauro & Syverson, 2020; Spurk & Straub, 2020). Despite the rise in job opportunities in specific industries such as IT and construction, it was unclear if immigrants holding temporary visas were able to take advantage of the employment growth in these industries

because of their qualifications and restricted visa conditions.

Impacts of COVID-19 Pandemic on People's Mental Well-Being

The pandemic had a direct impact on people's mental well-being, leading to emotions such as fear, worry, loss, and despair (Kang et al., 2020; Zhang et al., 2020). The COVID-19 and the strict lockdowns and border closures created a sense of uncertainty and fear, which in turn affected individuals' mental health (Asmundson & Taylor, 2020; Liu et al., 2020; Sun et al., 2020; Wang et al., 2020). Generalized anxiety disorder and inadequate sleep were found to be significant prevalence issues in the Chinese population in a study conducted in response to the COVID-19 pandemic (Huang & Zhao, 2020). These low levels of mental well-being were notably more common among individuals under the age of 35, especially those who paid excessive attention to news and information related to COVID-19 (Huang & Zhao, 2020).

Several studies found that a sense of uncertainty and fear, such as fear of unemployment and loss of income, increased the likelihood of employee tiredness and reduced their performance at the workplace (Asmundson & Taylor, 2020; Kang et al., 2020; Zhang et al., 2020). The above studies showed that COVID-19 negatively

impacted the mental well-being of some employees, especially essential employees such as food, supermarket, and healthcare employees who faced direct or indirect exposure to the disease, increased work demands, and reduced family interactions (Asmundson & Taylor, 2020; Kang et al., 2020; Zhang et al., 2020).

The perception of infection hazards prevented about half of the 308 public health employees surveyed in Maryland, USA, from reporting to work during a pandemic (Balicer et al., 2006). This perception was likely to have a negative impact on a health system's ability to cope with pandemics, including COVID-19, effectively (Balicer et al., 2006; Barbisch et al., 2015; Xiang et al., 2020). A wide range of mental health challenges, encompassing unhappiness, anxiety, nervousness, post-traumatic stress disorder, and frustration, were linked to earlier disease outbreaks, including the severe acute respiratory syndrome (SARS) in 2003 and the Ebola virus in 2014–2016, in both the general public and healthcare employees (Barbisch et al., 2015; Xiang et al., 2020).

Thus, the mental well-being of people has been connected to feelings of fear and uncertainty due to the impact of the COVID-19 pandemic (Asmundson & Taylor, 2020; Dubey et al., 2020; Kang et al., 2020; Zhang et al., 2020; Xiang et al., 2020). Figure 1 depicts how COVID-19 impacted people's mental well-being.

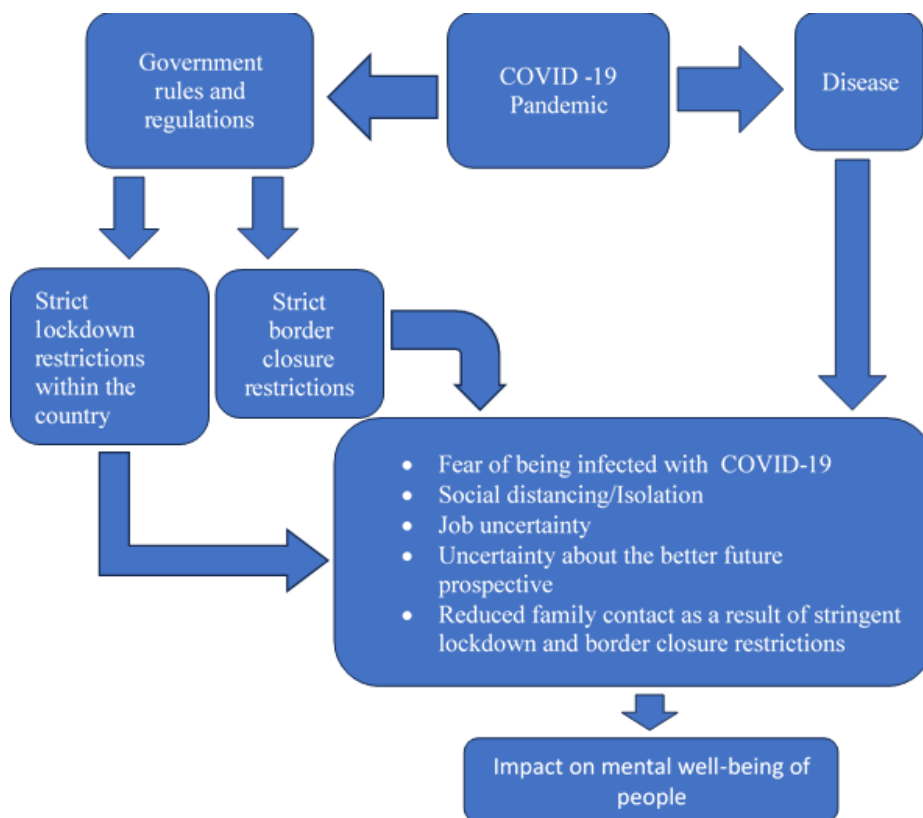


Figure 1. Intricate Impacts of COVID-19 on People's Mental Well-being

Note: Adopted from Asmundson & Taylor, 2020; Dubey et al., 2020; Kang et al., 2020; Zhang et al., 2020; Xiang et al., 2020.

From the literature reviewed, the study found a gap in that there is a shortage of studies that investigated the impacts of COVID-19 on the mental well-being of both employees and immigrants holding temporary visas, such as work and student visas, in New Zealand. However, Anderson et al. (2020); Belong Aotearoa (2020) and Every-Palmer et al. (2020) had only examined COVID-19-relative to job insecurity, financial difficulties, psychological distress, and low mental well-being. Therefore, this research aims to fill this gap in the literature and contribute to knowledge by investigating the impacts of COVID-19 on the mental well-being of Indian immigrants with temporary visas working in retail industries in Auckland, New Zealand, during and after COVID-19.

RESEARCH METHOD

This research employed mixed-method research, consisting of quantitative and qualitative methods, to determine the mental well-being of Indian immigrants with temporary visas working in retail industries in Auckland, New Zealand, during and after COVID-19. Mixed-method research is a versatile approach that combines qualitative and quantitative methods to investigate research problems thoroughly to benefit education and community contexts (Almalki, 2016; Ivankova & Wingo, 2018). It allows researchers to gather a wide range of data types and gain a more comprehensive understanding of complex issues (Almalki, 2016; Ivankova & Wingo, 2018).

RESEARCH DESIGN

Research design is a structured plan or framework employed to conduct a research investigation (Abutabenjeh & Jaradat, 2018). It encompasses drafting a comprehensive strategy and methods for collecting and interpreting data to address the research objectives and questions (Abutabenjeh & Jaradat, 2018). In this research, the World Health Organization Well-Being Index 5 (WHO-5) Test was employed to determine the mental well-being of Indian immigrants with work visas working in the retail industry during and after COVID-19. Additionally, the WHO-5 Test was used to determine the mental well-being of Indian students working with student visas in the retail industry who were made redundant during COVID-19 and went through additional education to enhance their skills in response to evolving job market demands.

World Health Organization Well-Being Index 5 (WHO-5) Test

The WHO-5 is a concise assessment tool employed to assess a participant's mental well-being in the research (Krieger et al., 2014; Topp et al., 2015). The test comprises five questions, each rated on a six-point scale

ranging from 0, indicating "at no time," to 5, signifying "all of the time." The raw score for the test was derived by summing the numerical values assigned to responses across the five questions. The resulting raw score ranged from 0 to 25, where 0 represented the lowest conceivable quality of life, and 25 signified the highest achievable quality of life. The raw score was multiplied by 4 to yield a percentage score between 0 and 100. A score of 0 indicated the lowest possible quality of life, while a score of 100 represented the highest achievable quality. For assessing the level of mental well-being based on participant scores, a 50% cut-off framework from the article by Topp, Østergaard, Søndergaard, and Bech was adapted for this research (Topp et al., 2015). According to this framework, participants were considered to have low mental well-being if their score was 50 or below and high mental well-being if their score exceeded 50 (Topp et al., 2015).

The test employed an odds ratio with a 95% confidence interval (CI) to determine which demographic factors were closely associated with experiencing low mental well-being both during and after the COVID-19 period. The 95% CI represented the range of values where the researcher had a 95% certainty that the results would lie between a defined lower and upper range (Tenny & Hoffman, 2017).

SAMPLING METHOD AND DATA COLLECTION

The research employed a convenience sampling method to communicate with Indian immigrants holding temporary visas and working or had previously worked in the Auckland retail industry for data collection. Convenience sampling, as a non-probability sampling method, enables researchers to reach out to participants in a more convenient manner (Etikan et al., 2016). The researchers contacted potential participants through visits to diverse retail workplaces and sending invitations via social media sites such as Twitter, Facebook, LinkedIn, and Instagram, and encouraged them to engage in the research. The data-gathering process was conducted in compliance with accepted ethical guidelines. This research obtained approval from the Ethics Committee of Otago Polytechnic Auckland International Campus, New Zealand, under the Ethics Application number AIC92.

RESULTS AND DISCUSSION

There were 95 participants who completed the test, 70 of whom had work visas, and 25 had student visas. The classification of the demographic information for participants with work and student visas is presented in Table 1.

Table 1. Demographic information of the participants

Demographic Factors	Details	Number of Participants (%)	
		Work Visa	Student Visa
Gender	Male	51 (72.86%)	13 (52%)
	Female	19 (27.14%)	12 (48%)
	Non-Binary Gender	0	0
Age (years)	18 to30	43 (61.43%)	17 (68%)
	31 to 40	26 (37.14%)	8 (32%)
	41 to 55	1 (1.43%)	0
	More than 56	0	0
Job position	Manager	29 (41.43%)	
	Assistant Manager	5 (7.14%)	
	Supervisor	5 (7.14%)	
	Customer Service Rep.	14 (20%)	
	Others	17 (24.28%)	
Current Qualification	Masters		8 (32%)
	Post Graduate Diploma		6 (24%)
	Undergraduate		11 (44%)

Impacts of COVID-19 on the Mental Well-being of Work Visa Participants

The findings indicate that 48.57% of participants with work visas reported that they experienced low mental well-being during and after COVID-19, as illustrated below in Table 2. The mental well-being of participants with work visas as determined by gender, age, and job position during and after COVID-19 is further illustrated below in Tables 2 and 3. The findings show that compared with 47.06% of male participants with work visas, more than half, or 52.63%, of female participants with work visas reported that they experienced low mental well-being during and after COVID-19, as illustrated in Table 2. Further, the findings show that male participants with work visas were 20% less likely than female participants with work visas to report having low mental well-being during and after COVID-19, as illustrated in Table 3. The p-value for the above result was 0.678, which was more than the standardised p-value ($p < 0.05$), indicating that the result was not significant, as illustrated in Table 3. However, the findings demonstrated that female participants with work visas were more likely than male participants with work visas to report experiencing low mental well-being during and after COVID-19, as illustrated in Tables 2 and 3.

The findings indicate that half, or 50%, of participants with work visas in the 31–40-year age group reported experiencing low mental well-being during and after COVID-19 compared with other age groups, as illustrated in Table 2. The findings in Table 3 corroborate the findings above, demonstrating that participants with work visas in the 31–40-year age group were more likely than those between the 18–30-year age group and 41-55-year age group to report experiencing low mental well-being. The low mental well-being during and after COVID-19 among participants with

work visas in the 31–40-year age group was three times more likely than those in the 41–55-year age group, as illustrated in Table 3. However, participants with work visas in the 18–30-year age group were 2.87 times more likely than those in the 41-55 age group to report experiencing low mental well-being during and after COVID-19. The above results were insignificant as their p-values exceeded the standardised significance threshold of $p < 0.05$, as illustrated in Table 3.

Further, the findings indicate that a higher proportion of participants with work visas employed as supervisors and managers than the rest of those in other different job positions reported that they experienced low mental well-being during and after COVID-19, at 60% and 55.17%, respectively, as illustrated in Table 2. Additionally, the findings show that, compared with participants with supervisor work visas, all participants with work visas from different job positions were less likely to have low mental well-being during and after COVID-19, as illustrated in Table 3. The probability of having low mental well-being during and after COVID-19 was 18% lower for participants with work visas who were employed in manager job positions compared with those who were in supervisor job positions. It has been found that participants with work visas employed in assistant manager positions had a 56% lower likelihood of experiencing low mental well-being during and after COVID-19 compared with those employed in supervisory positions. The probability of experiencing low mental well-being during and after COVID-19 was 50% lower for participants with work visas employed as customer service representatives than for those employed in supervisory positions. Similarly, participants with work visas employed in 'others' job positions were 53% less likely to experience low mental well-being during and after COVID-19 than those employed in supervisory positions. Therefore, the

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findings demonstrate that participants with work visas holding supervisory positions were more likely to experience low mental well-being during and after COVID-19. However, the p-values of the above results

exceeded the standardised significance threshold of $p < 0.05$, indicating that these results were insignificant, as illustrated in Table 3.

Table 2. Mental Well-being of Participants Based on WHO-5 with a 50% Cut-off

Description		Gender		Age (Years)			Job Position				
Groups and Scores	Number	Male	Female	18-30	31-40	41-55	Manager	Assistant Manager	Supervisor	Customer Service Rep.	Others
Well-being score ≤ 50	34 (48.57%)	24 (47.06%)	10 (52.63%)	21 (48.84%)	13 (50%)	0	16 (55.17%)	2 (40%)	3 (60%)	6 (42.86%)	7 (41.18%)
Well-being score above 50	36 (51.43%)	27 (52.94%)	9 (47.37%)	22 (51.16%)	13 (50%)	1 (100%)	13 (44.83%)	3 (60%)	2 (40%)	8 (57.14%)	10 (58.82%)
Total	70	51	19	43	26	1	29	5	5	14	17

Note: Examples for "Others" under Job Position are Store Assistant, Customer Support Assistant, etc.

Table 3. Mental Well-being of Participants (Measured by WHO-5 With a 50% Cut-off)

Description	Well-being (WHO-5)	P-value
	(OR* at 95% CI)	
Gender		
Male	0.80 (0.28 to 2.30)	0.678
Female	1 (Reference)	
Age (years)		
18-30	2.87 (0.11 to 74.29)	0.526
31-40	3 (0.11 to 80.40)	
41-55	1 (Reference)	
Job Position		
Manager	0.82 (0.12 to 5.67)	0.841
Assistant Manager	0.44 (0.03 to 5.58)	0.530
Supervisor	1 (Reference)	-
Customer Service Representative	0.50 (0.06 to 3.99)	0.513
Others	0.47 (0.06 to 3.56)	0.462

*Note: *Odd Ratio at 95% Confidence Interval*

Impacts of COVID-19 on the Mental Well-being of Student Visa Participants

The findings show that 80% of participants with student visas scored less than or equal to 50, which means 4 out of 5 experienced low mental well-being during and after COVID-19, as illustrated in Table 4. The mental well-being of participants with student visas during and after COVID-19, as determined by gender, age, and current qualification, is further illustrated in Tables 4 and 5. The findings show that compared with 76.92% of male participants with student visas, 83.33% of female participants with student visas report experiencing low mental well-being during and after COVID-19, as illustrated in Table 4. The findings show that male participants with student visas were 33% less likely than female participants with student visas to report experiencing low mental well-being during and after COVID-19, as illustrated in Table 5. This result was insignificant, as the p-value was 0.690, higher than the standardised significance threshold of $p < 0.05$, as illustrated in Table 5. However, the findings reveal that female participants with student visas were more likely

than male participants with student visas to report experiencing low mental well-being during and after COVID-19, as illustrated in Tables 4 and 5.

The findings show that compared with 76.47% of participants with student visas from the 18–30-year age group, 87.5% of participants with student visas in the 31–40-year age group reported experiencing low mental well-being during and after COVID-19, as illustrated in Table 4. The findings in Table 5 support the above result that participants with student visas in the 31–40-year age group were more likely than those from the 18–30-year age group to experience low mental well-being. The findings show that participants with student visas in the 18–30-year age group had a 54% lower chance of experiencing low mental well-being during and after COVID-19 than those from the 31-40-year age group, as illustrated in Table 5. However, the p-value for the above result was 0.527, which was higher than the standardised p-value ($p < 0.05$), indicating that the result was not significant, as illustrated in Table 5.

Further, the findings indicate that 100% of participants with student visas with postgraduate diploma qualifications reported experiencing low mental well-being, compared with 87.5% of participants with master's student visas and 63.64% of participants with undergraduate student visas, as illustrated in Table 4. The findings indicate that the participants with student visas holding postgraduate diploma qualifications were 7.80 times more inclined to experience low mental well-being during and after COVID-19 compared to participants with student visas holding undergraduate qualifications, as illustrated in Table 5. The participants

holding student visas and possessing master's qualifications were four times more inclined to experience low mental well-being during and after COVID-19 compared to those with undergraduate qualifications. Therefore, the above findings demonstrate that participants with student visas possessing postgraduate diplomas were significantly more probable to experience low mental well-being during and after COVID-19. However, these results were insignificant since their p-values were higher than the standardised significance threshold of $p < 0.05$, as illustrated in Table 5.

Table 4. Impacts of COVID-19 on the Mental Well-being of Student Visa Participants Based on WHO-5 With a 50% Cut-off

Description		Gender		Age (Years)		Current Qualification		
Groups and Scores	Number	Male	Female	18-30	31-40	Masters	PG Diploma	Undergraduate
Well-being score ≤ 50	20 (80%)	10 (76.92%)	10 (83.33%)	13 (76.47%)	7 (87.5%)	7 (87.5%)	6 (100%)	7 (63.64%)
Well-being score above 50	5 (20%)	3 (23.08%)	2 (16.67%)	4 (23.53%)	1 (12.5%)	1 (12.5%)	0	4 (36.36%)
Total	25	13	12	17	8	8	6	11

Note: PG Diploma is Postgraduate Diploma; examples for Undergraduate are Level 7 or 6 Diploma, Certificates or Professional Qualifications.

Table 5. Rates of low Mental Well-being of Student Visa Participants (Measured by WHO-5 With a 50% Cut-off)

Description	Well-being (WHO-5)	P-value
	(OR at 95% CI)	
Gender		
Male	0.67 (0.09 to 4.89)	0.690
Female	1 (Reference)	
Age (years)		
18-30	0.46 (0.04 to 4.99)	0.527
31-40	1 (Reference)	
Current Qualification		
Masters	4 (0.35 to 45.39)	0.263
PG Diploma	7.80 (0.35 to 173.99)	0.195
Undergraduate	1 (Reference)	-

Note: *Odd Ratio at 95% Confidence Interval

The WHO-5 test (50% cut-off) was used to determine the mental well-being of participants with work and student visas during and after COVID-19, and the findings indicate that roughly 56.84% of the total participants reported that they experienced low mental well-being, as illustrated in Tables 2 and 4 above. The findings indicate that just 48.57% of all participants with work visas reported that they experienced low mental well-being, compared to 80% of the total participants with student visas who reported experiencing low mental well-being during and after COVID-19.

The data indicates that 60% of participants with work visas holding supervisory job positions reported that they experienced low mental well-being during and after COVID-19, exceeding the proportion of participants with work visas occupying different job positions, as illustrated in Table 2. Participants with work visas

experienced low mental well-being since COVID-19-related job uncertainty still affects the market, particularly for those working in small retail establishments. Work visa participant # 2 corroborates the above findings "Due to the increasing competition for jobs brought on by the high unemployment rate after the implementation of COVID-19, it would be challenging for them to obtain employment as temporary visa holders in a different field without prior experience. Moreover, the rising number of COVID-19 cases and the new COVID version are also impacting my mental well-being negatively, as these can be signals of the beginning of additional strict countrywide lockdowns and delays in border opening."

Among student visa participants, participants with current postgraduate diploma qualifications reported experiencing low mental well-being during and after

COVID-19, with 100% of them affected, in contrast to all the other different qualifications, as illustrated in Table 4. The participants with student visas experienced low mental well-being due to an uncertain future because there were no opportunities to recruit temporary immigrants during that period. Student Visa Participants # 3 supports the above results *"Most retail sectors, including the one where I was employed, were entirely shuttered due to the COVID-19 lockdown. So, I lost my job, and the effects of COVID-19 were the main factor for my job loss. It was challenging for me and other people with similar circumstances to find another employment and maintain the legal work visa at the time because no one was recruiting temporary immigrants. Due to these reasons, I felt pressured to change my visa to a student visa and restart my life to pursue new opportunities, which negatively impacted my mental health."*

Based on a WHO-5 test with a 50% cut-off, Dodd et al. (2021) discovered that 65.3% of international and domestic student participants reported experiencing low mental well-being following the COVID-19 outbreak in Australia. It can be concluded that the percentage of students in the Dodd et al. (2021) study who reported experiencing low mental well-being is lower compared to the percentage of participants with student visas who reported experiencing low mental well-being due to the COVID-19 pandemic in the present study. Additionally, it was discovered in the present study that more female participants with student visas reported experiencing low mental well-being during and after COVID-19 than male participants with student visas, and more participants with student visas in the 31–40-year age group reported experiencing low mental well-being during and after COVID-19 than the different age groups. Similarly, Dodd et al. (2021) found that more female student participants than male student participants reported experiencing low mental well-being during and after COVID-19. However, Dodd et al. (2021) indicated that student participants in the 21-23-year age group reported experiencing lower mental well-being than those in different age groups. Besides, several other studies concur that female participants, compared to male participants, experienced a greater level of low mental well-being due to the COVID-19 pandemic (Liu et al., 2020; Sun et al., 2020; Wang et al., 2020).

LIMITATIONS AND FUTURE RESEARCH RECOMMENDATIONS

First, this research was restricted to the Auckland region instead of covering the entire country of New Zealand. Immigrants reside throughout New Zealand, not just in the Auckland region, including in Hawke's Bay, Wellington, Christchurch, and other areas; this research did not investigate the mental well-being during and

after COVID-19 of immigrants who reside in those other regions. As a result, future research should examine the mental well-being during and after COVID-19 of immigrants with temporary visas who reside in other regions of New Zealand. More comprehensive research will provide further information on the adverse and favourable impacts of COVID-19 on the professional and personal aspects of immigrant participants' lives.

The second limitation is that this research was restricted to the retail industry. It did not apply to immigrants with temporary visas who worked in New Zealand's other industries, including hospitality and healthcare. It is recommended that future research be focused on small businesses and different industries in New Zealand, including healthcare and hospitality. As an example, the COVID-19 lockdown and border closure constraints significantly impacted the hospitality industry in New Zealand. Several businesses experienced difficulties operating profitably because of the COVID-19 pandemic, resulting in many jobs being lost and business owners losing their businesses (Baum et al., 2020; Robson, 2021). Consequently, COVID-19 may have more severe negative mental well-being impacts on these individuals.

The final recommendation is that, since the present research is not determined by longitudinal research and clinical trials, a method involving both should be explored to fully understand people's mental well-being during and after COVID-19. As a result, longitudinal research can contribute to determining the mental well-being during and after COVID-19 of New Zealand residents, citizens, and immigrants with temporary visas, including those with work and student visas, by monitoring participants over an extended period.

CONCLUSION

This research found that those with work visas who were employed full-time in the retail industry and those with student visas who worked full-time in retail but went back to university to further their education to improve their skills experienced low mental well-being due to COVID-19. The literature analysis indicated that immigrants with temporary visas experienced a lot of the adverse impact of the COVID-19 pandemic, which led to a higher number of job losses among them. Most temporary visa holders claimed that COVID-19 caused them to experience increased levels of psychological distress and low mental well-being, especially for those in the retail and hotel industries (Anderson et al., 2020; Askola et al., 2021; Baum et al., 2020; Berg et al., 2020; Every-Palmer et al., 2020; Organisation for Economic Co-operation and Development, 2020). The World Health Organization (WHO-5) test was used in mixed-method research to investigate the low mental well-being of Indian immigrants on temporary visas during

and after COVID-19. This method facilitated eliminating a gap in the New Zealand literature by determining the low mental well-being caused by COVID-19 among Indian immigrants on temporary visas, as there are few studies that represent the low mental well-being of immigrants with temporary visas in New Zealand during and after COVID-19.

The World Health Organization (WHO-5) test concluded that 80% of participants with student visas experienced low mental well-being due to COVID-19, compared to 48.57% of those with work visas. Additionally, the present research revealed that the leading causes of participants' low mental well-being during and after COVID-19 were changes to immigration rules, job uncertainty, and being unable to visit family members because of strict border restrictions. It can be surmised that participants with student visas experienced lower mental well-being during and after COVID-19 than those with work visas.

ACKNOWLEDGMENT

None.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

FUNDING

No funding was received for this work.

ETHICAL CONSIDERATION AND INFORMED CONSENT

Not applicable.

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