Who's to blame for the spread of COVID-19 in New Zealand? Applying attribution theory to understand public stigma

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Abstract

While on-going COVID-19 pandemic has brought increased discrimination, stigma, and racism toward individuals of Asian descent, little research has concentrated on public perceptions regarding who is to blame for the spread of the virus. This study extends integrated threat theory and attribution theory by examining the extent to which prejudice against Asians is related to blame attribution in New Zealand. The paper employs a mixed-method approach, including a series of measures analysed quantitatively and two additional open-ended questions analysed qualitatively. The findings suggest that to understand public stigma in ambiguous crises/events, it is significant to look beyond theoretic frameworks. Particularly, this research provides better understanding of how blame attribution has developed and linked with threats in the pandemic. First, fear of contact with COVID-19 is positively related to symbolic and realistic threats. Second, the more people believe COVID-19 is a public health risk, the more symbolic and realistic threats they have. Third, realistic threat is linked to blame attribution.

Keywords: prejudice, integrated threat theory, attribution theory, COVID-19

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As of April 20, 2021, more than 138 million people have been infected and more than 3 million people have died from COVID-19 (Coronavirus Resource Center). The pandemic has had significant impacts on people's lives, global healthcare systems, and global economies. The global pandemic has sent billions of people into instability and fear, and provoked countless instances of discrimination, racism, prejudice, and violence. As the virus spreads, many world leaders, media, and people in general are increasingly looking for something and/or someone to blame.

Croucher, et al. (2020) reported individuals of Asian descent have suffered increased discrimination, stigma, and racism since the outbreak of COVID-19. In many nations, individuals of Asian descent have been blamed for the spread of the virus, and poorly treated as a result (Second Author et al., 2020). In the United States for example, Asian businesses have been boycotted, Asians have been harassed, and even attacked (Lee & Yadav, 2020). Anti-Asian sentiment online has skyrocketed since the start of the pandemic, with increased incidents of online hate speech and derogatory hashtags on Twitter (Mcguire, 2020). All in all, as traditional and social media coverage reported the COVID-19 pandemic originated in China, negativity toward individuals of Asian descent linked to COVID-19 has increased in 2020 (Ziems et al., 2020). Therefore, this study examines the extent to which prejudice toward Asians is related to blame attribution for COVID-19 in New Zealand.

Integrated Threat Theory

According to Allport (1954), prejudice is the result of negative beliefs and attitudes toward the outgroup. It is considered "thinking ill of others without sufficient warrant" (p. 6). One of the explaining factors of prejudice and discrimination in multi-ethnic and multicultural settings is threat perception (Second Author, 2017). Stephan and Stephan developed integrated threat theory (ITT) based on Allport's research on prejudice (Stephan & Stephan, 1996, 2000). ITT has served as a theoretical framework to understand and predict prejudice from the ingroup (cultural dominant group) toward the outgroup (cultural minority group) (Second Author, 2013).

Stephan and Stephan (2000) argue ingroup members have negative feelings of threat imposed by outgroup members. Moreover, these negative feelings of threat may cause intergroup prejudice (Esses et al., 1993). Stephan and Stephan (2000) categorize threats, whether real or perceived, into four types: realistic threats, symbolic threats, intergroup anxiety, and negative stereotypes.

Realistic threats are perceived threats to the existence of the ingroup, for example, material and physical well-being, welfare, and economic and political power (Stephan & Stephan, 1996). The perceptions of threats alone are enough to cause prejudice toward the outgroup (Stephan & Stephan, 2000). Moreover, a recent study has shown the more realistic threats the ingroup members perceive, the more prejudiced they become (Ramsay & Pang, 2017).

Symbolic threats are perceived threats to the way of life of the outgroup, such as values, beliefs, standards, and morals (Stephan & Stephan, 1996). Differences in cultural backgrounds have an influence on negative attitudes and behaviors of the ingroup toward the outgroup (Spencer-Rodgers & McGorvern, 2002). Furthermore, Ramsey and Pang (2017) state that symbolic threats are positively related to prejudice.

Intergroup anxiety happens when individuals feel threatened while interacting with other group members as they are afraid of being embarrassed, rejected or exploited (Stephan & Stephan, 1985; 2000). On the other hand, Islam and Hewstone (1993) state when the outgroup individuals have more (either real or perceived) advantages, the ingroup members may have negative feelings and anxiety against the outgroup. As a result, negative feelings and intergroup anxiety may lead to negative attitudes, behaviors and expressions toward the outgroup.

Negative stereotypes include assumed and implied threats from the ingroup toward the outgroup (Stephan & Stephan, 2000). During an intergroup interaction, the ingroup is afraid of negative effects imposed by the outgroup (Croucher, 2017). Moreover, stereotypes also serve as expectations associated with social attitudes and behaviors of the stereotyped groups (Hamilton et al., 1990). For instance, if an outgroup has been stereotyped as aggressive, the ingroup members will expect a negative interaction with that group (Stephan & Stephan, 2000). Researchers demonstrate that prejudice is related to negative stereotypes because negative feelings and attitudes will take place if the outgroup members do not meet the social expectations of the ingroup (Esses et al., 1990).

ITT has been used in various contexts such as in communication and media (Atwel Seate et al., 2018), communication and religion (Tausch et al., 2009), communication and organizational settings (Curşeu et al., 2007), etc. ITT has also been explored in the medical context; yet, there are few studies about prejudice toward people with health issues like HIV/AIDS, cancer, and disabilities (Berrenberg et al., 2002; Bustillos & Silván-Ferrero, 2013). In general, this study aims to fulfill our understanding of prejudice and blame attribution toward Asians/Chinese during a global health pandemic.

Blame Attribution

Findings from a data mining study of news and social media found that mentions of COVID-19 in all contexts associated it with China and more specifically Wuhan using negative social stigmas of Chinese people that encourage bias, hostility, and discrimination "potentially encouraging xenophobia" (Chang, et al., 2020). Blame attribution in crisis communication complements and enhances present research on prejudice and blame attribution towards Asians/Chinese during a global health pandemic because it directly represents the inductive process where people select facts and then draw conclusions about an entire group based on those selected facts as we discussed with ITT. For example, in a crisis context, one of the ways that people make sense of the crisis and manage their own uncertainty about the situation is by attributing blame to those people or groups they believe to be responsible (Diers-Lawson, 2020). In the context of 'surprise' events like disasters and pandemics, Longstaff and Yang (2008) point out that blame attribution can be reduced if organizations, like governments and health agencies, or people are viewed as being prepared for the crisis and respond effectively. They also found that in situations where blame attribution is low, it is easier to work with affected publics to share information and solve problems related to the crisis. Certainly in the case of the COVID-19 pandemic, there can be little denial that the world was ill-prepared, fostering the conditions for increased blame attribution. This can account for discrepancies in the blame attribution findings for the COVID-19 pandemic from those analyses from the first two months of the pandemic (February and March, 2020) where there seemed to be little blame attribution for the outbreak and spread of the disease (Damiano & Allen, 2020) compared with later findings indicating xenophobic levels of blame attribution towards China and Chinese people driven by news and political coverage of

the pandemic (Chang, et al., 2020). Therefore, understanding the function and role of blame attribution within the crisis communication literature provides insight into its relevance and impact for ITT.

Key Findings on Blame Attribution

There are four central findings on blame attribution in the organizational context, each of which provides insight into understanding and predicting the degree to which Asians or Chinese people as a 'group' may be blamed for the COVID-19 pandemic. First, blame attribution is higher when there is a clear association or a logical connection between an issue and an organization or group (Claeys & Cauberghe, 2015). In the context of COVID-19, global media and social media associated the disease with China and Wuhan more specifically (Chang, et al., 2020); therefore, we expect to see increased blame attribution for Asians and Chinese people. Second, blame attribution increases when the group that has been associated with the issue is judged to demonstrate low commitment to the issue or an inauthentic level of concern about their association with the issue (Lacey, Kennett-Hensel, & Manolis, 2015). The narratives emerging about China's willingness to be transparent, the traditions around so-called wet-markets, and even Chinese conspiracies to spread the disease (Chang, et al., 2020) create the conditions where low commitment or inauthentic concern can be created. Third, blame attribution is influenced by judgments of the group's competence in successful management of the issue (Hyvärinen & Vos, 2015). In the case of COVID-19, the evidence for China's 'competence' to manage the issue was evidenced at the spread of the disease. The first three are indirect factors that increase blame attribution. The fourth is that literature also points to direct blame attribution for an emergent crisis (Coombs, 2007). In this case, the direct negative social stigmatization of Chinese people encouraging bias, hostility, and discrimination has been identified across news and social media coverage of COVID-19 (Chang, et al., 2020).

Blame Attribution in Ambiguous Situations

Building on these four findings, blame attribution is a core concept underlying different crisis communication theories connecting situational, social responsibility, crisis history, and ethics (Kim, 2013; Ping, Ishaq, & Li, 2015). In the context of COVID-19, it has already been demonstrated as a critical factor connecting to news and social media coverage of the pandemic and prejudice against China and Chinese people or Asians in general (Chang, et al., 2020). Previous crisis research suggests there are two components of blame attribution that most influences people's attitudes. First, the degree to which people believe that groups and organizations can be materially held accountable for a crisis (Rosati et al., 2019). If a situation is viewed as a transgression – one where direct blame is clearly attributable (Diers-Lawson, 2017) - the result is often a belief that a critical trust has been betrayed by the offending group amplifying negative feelings towards those committing the transgression (Kim, Kim, & Cameron, 2009; Ma, 2018). Second is the belief that the group or organization that is blamed has control over the situation – or the degree to which the crisis could have been prevented (Weiner, 1985, 2006). Research in crisis communication assumes that blame attribution is one of if not the most critical considerations, that the more responsibility attributed to groups and organizations the higher the expectations placed on organizations to effectively respond to issue or crisis creating accountability for organizations (Brown & Ki, 2013; Bundy & Pfarrer, 2015; Coombs, 2007). Moreover, previous research also suggests higher perceptions of blame attribution result in greater negative outcomes (Coombs &

Holladay, 1996; Kim, 2014; Schwarz, 2012) including negative behavioral intention towards those groups or organizations most blamed for crises (Ping et al., 2015; Yum & Jeong, 2014).

However, Bentley, Oosman, and Shah (2018) point out that present theory building around blame attribution struggles to account for contexts in which blame for the situation is more ambiguous, which is clearly the case with COVID-19. Despite findings of public attitudes of blame attribution, as a pandemic, the situation is out of any group or organization's control, increasing the propensity for the public to want to attribute blame (Longstaff & Yang, 2008). At the same time that governments, businesses, and other groups must share information and collectively work to solve problems created by the pandemic; unfortunately, because of the ambiguity, this is less likely to be successful (Longstaff & Yang, 2008) potentially creating a vicious cycle of blame attribution and lower attention to information and problem-solving efforts. Therefore, in crises like pandemics, it is likely more difficult to manage blame attribution – especially when groups are blamed and do not have a direct means of responding, like a regular organization could (Diers-Lawson, 2017). This leads us to the proposition that while there may be no material blame to attribute to Asians/Chinese people, the facts are not as important as public perception of them (Wang & Park, 2017). It is essential to look beyond attribution-based theories in order to fully understand the factors driving public reactions to crises – especially those where blame attribution can be ambiguous.

ITT and Blame

Therefore, ITT provides the explanation of how prejudice functions, but blame attribution provides the contextual explanation for how such prejudice has been fostered during the COVID-19 crisis. Judgments about blame are not made in a vacuum, they come from different people's experiences and identities. In addition to the earlier discussion about how ITT influences intergroup anxieties, the previous findings are also well-aligned with research on attitude formation emphasizing the importance of constructs like perceived susceptibility, situation severity, demographics, and efficacy as key predictors of people's reactions to stimuli and situations (Chen, Gully, & Eden, 2001; Rosenstock, Strecher, & Becker, 1988) as well as research predicting that our behaviors can be accounted for by our existing attitudes, social norms, and perceived situational control (Ajzen, 2005). Moreover, these findings align with research in crisis communication suggesting that public perceptions of their own control over issues versus uncertainty about the situation affect not only their own emotional reactions to crises but attitudes about and actions towards groups and organizations also connected to the crisis (McDonald & Cokley, 2013; Mou & Lin, 2014). Therefore, blame attribution and competence may ultimately be reflections of people's own insecurities and low situational efficacy rather than direct reflections of attitudes about groups or organizations in contexts, like pandemics, where blame attribution is perceptual rather than material. This may help to explain existing findings on social media where Asians/Chinese have been increasingly blamed for COVID-19 and also predict a relationship between more general public attitudes about prejudice and crisis. Yet, there are too few direct connections between prejudice and crises – especially pandemics to draw specific conclusions. This is a critical gap this study hopes to fill.

Research Questions

National governments and health agencies have responded differently to COVID-19. New Zealand's confirmed death toll sits at 25 (with 2128 cases) (Johns Hopkins Coronavirus Resource Center, updated daily). This relatively low number of cases is likely due to early

lockdown measures restricting public movements, strict border controls, and strict quarantine protocols for returning New Zealanders. The government also initiated a media campaign including the key messages “Be Kind” and “Team of Five Million”. Throughout 2020, there were few reported cases of blaming of Asians in the New Zealand press. Rsearch shows New Zealanders on average (unlike other nationalities) either tend to not publicly blame Asians for the spread of COVID-19 and/or actively take steps to combat racism against Asians. Research shows that New Zealand scored lower than the US, Italy and Spain on prejudice (ITT) (Second Author et al., 2020), and this is partially attributed to centralised government leadership, less polarised media in New Zealand, and less fear of COVID-19 in New Zealand (Second Author et al., 2020; Tan, 2020). In addition, when isolated incidents of racism and prejudice did occur in 2020 toward Asians, some New Zealanders spoke out against the actions and told the perpetrators to “be kind” and “not be racist” (Collins, 2020). Empirical research shows New Zealanders score lower on prejudice than other nations (see Second Author et al., 2020). Research also shows that fear of a virus influences how people respond to groups perceived to be carriers of an illness (Cottrell & Neuberg, 2005; Faulkner et al., 2004; Navarette & Fessler, 2006; Navarette et al., 2007). Additionally, press reports show that New Zealanders tend to not blame or attribute the spread of COVID-19 or blame COVID-19 on Asians. However, to confirm previous research on anti-Asian prejudice during COVID-19, to better understand how prejudice and blame relate to one another in the New Zealand context, and to explore the influence of fear of COVID-19 on blame attribution and prejudice, the following research questions are posed:

RQ1: To what do New Zealanders attribute blame regarding COVID-19?
RQ2: To what extent can blame attribution be attributed to prejudice?
RQ3: To what extent is fear of COVID-19 related to prejudice?

Method

This study used a mixed-method approach, which includes a quantitative survey, and additional open-ended questions that were analysed qualitatively. After receiving approval from Massey University Human Ethics Committee (number: 4000022497), we collected data in New Zealand via an online survey with the assistance of Qualtrics. Online panels, such as those from Qualtrics are comparable to other populations in published research (Roulin, 2015). In this study, Qualtrics was tasked with acquiring a representative sample of New Zealand’s population. Qualtrics does this through contacting potential participants via social media outlets. Qualtrics provided a small financial incentive for participation. Participants were provided an informed consent prior to starting the survey. The data was collected anonymously and no identifying information was collected. The survey included a series of demographic questions, measures of integrated threat, a measure of the extent to which COVID-19 is a risk to health, and two open-ended questions.

Participants

Participants for this study included 330 individuals. However, after data cleaning for complete answers and full open-ensed responses, 23 participants were removed from data analysis. In total, 307 participants were included in the final analysis. Table 1 presents the full demographic information for all participants.

Table 1
Participant Demographics

Variable	*n*
Age	
18-19 years of age	24
20-29 years of age	76
30-39 years of age	70
40-49 years of age	33
50-59 years of age	36
60-69 years of age	43
70 and above	25
Sex	
Male	141
Female	166
Political Affiliation	
National	37
Labour	80
NZ First	6
Green	6
ACT	4
Conservative	5
Did not Provide	169
Highest Educational Level	
High School	139
2-year degree	44
4-year degree	85
Master's	33
Doctorate or Equivalent	6

Measures

All surveys included demographic questions and the following measures: Measure of Symbolic threat (Stephan et al., 1999), Measure of Realistic Threat (Stephan et al., 1999), and a Fear of COVID-19 Scale modified from the Fear of AIDS Scale (Bouton et al., 1987). See Table 2 for the means, standard deviations, correlations, and alphas associated with the study variables. Confirmatory factor analyses (CFAs) were conducted on each construct following standards set by Hu and Bentler (1999) to ensure the validity of the study constructs. See Table 3 for fit indices for study measures.

Table 2
Means, Standard Deviations, Correlations, and Reliabilities of Study Variables

Variable	*M*	*SD*	α	(1)	(2)	(3)	(4)	(5)
(1) Symbolic Threat		3.55	1.15	.84	-			
(2) Realistic Threat		3.33	1.19	.85	.78**	-		
(3) COVID Contact Fear	2.85	.37	.78	.13*	.10*	-		
(4) COVID Public Health Fear	2.80	.68	.79	.12*	.12*	.03	-	
(5) COVID Personal Health Fear	3.27	.59	.81	.01	.03	.04	.22**	-

Note: * $p < .05$, ** $p < .01$.

Table 3
Fit Indices and Dropped Items for Study Measures

Measure	CFI	SRMR	RMSEA	$\chi 2$	Deleted Items: None
Symbolic Threat	.98	.04	.04	$\chi 2(55) = 105.24$, $p = .05$	None
Realistic Threat	.97	.05	.05	$\chi 2(55) = 101.29$, $p = .05$	None
Fear of COVID-19	.98	.05	.07	$\chi 2(24) = 44.19$, $p < .0001$	None

Measure of Symbolic Threat. Three items from Stephan et al. (1999) measured symbolic threat. Sample items were: ‘‘New Zealand identity is threatened because there are too many Chinese today,’’ ‘‘New Zealand norms and values are threatened because of the presence of Chinese today,’’ and ‘‘Chinese are a threat to New Zealand culture.’’ Responses ranged from (1) *strongly disagree* to (5) *strongly agree*. A higher score indicated a stronger feeling of threat. The scale has shown high reliability ranging from .85 to .90 (González, et al., 2008; Croucher, 2013; Croucher, et al., 2020).

Measure of Realistic Threat. The measure of realistic threat included three statements that assessed the effects of the outgroup on the economic situation in New Zealand. Sample statements were: ‘‘Because of the presence of Chinese, New Zealanders have more difficulties finding a job,’’ ‘‘Because of the presence of Chinese, New Zealanders have more difficulties finding a house,’’ and ‘‘Because of the presence of Chinese, unemployment will increase.’’ Responses ranged from (1) *strongly disagree* to (5) *strongly agree*. Higher scores indicate more threat. This scale has also shown reliability ranging from .80 to .90 (González et al., 2008; Croucher, et al., 2020).

Fear of COVID-19. To measure the extent to which individuals perceive COVID-19 as a threat, 14 items from Bouton et al. (1987) were employed. While developed to measure fear of HIV/AIDS, the items were modified to focus on COVID-19. The scale has three factors, which were retained in this study: fear of contact with the virus, personal fear of contracting the virus, and belief that the virus is a public health concern. Sample items included: “I am afraid I will get COVID-19,” “COVID-19 will become a severe and widespread epidemic,” and “I wouldn’t mind being in the same room with a friend who had COVID-19.” Reliabilities have ranged from .80 to .89 (Bouton et al., 1987).

Open Ended Questions. Two questions in the survey were open-ended, providing the participants with a possibility to write their own answers not restricted by any criteria or space. The questions were: a) Why did COVID-19 spread so rapidly in New Zealand? And b) Who is to blame for COVID-19? The answers to both questions ranged from one word (e.g. “Tourism”) to several sentences containing up to 100 words. The analysis of the open-ended questions followed the guidelines of thematic analysis (Braun & Clarke, 2006). Thematic analysis is aimed at identifying common patterns across a dataset, where the responses from different participants are coded and then grouped into several themes based on similar meanings. Braun and Clarke (2006) recommend following the initial coding and identification of themes and sub-themes with continuous re-reading and revising existing themes until the final stages of the analysis and interpretation of findings. As our study is exploratory in nature, we employed a bottom-up thematic analysis, where the codes, categories and themes were driven by the data. On the other hand, thematic analysis approach

enables the study to apply statistical analyses in order to determine the reliability of the coding themes (Boyatzis, 1998).

Two co-authors separately performed the initial coding of both sets of data of two open-ended questions. As there are no research studies done so far using qualitative responses in surveys on the Covid-19 origins and spread, we used thematic analysis rather than content analysis, which would employ the existing codes and categories. Thematic analysis involved making decisions on coding and labelling of themes based on the participants' statements. There were no pre-existing codes or categories, so all codes and themes were based on the quotes taken from the participants' responses. For example, for the first question on why Covid-19 spread rapidly in New Zealand, the theme *Tourism* was derived from the codes based on such participants' quotes: "overseas travellers"; "because of international travel"; "people flying into the country"; "we travel a lot and many people caught it overseas", etc. The theme *People not Following the Rules* was derived from the codes reflected in the examples of participants' responses, such as: "most people refused staying home and distancing"; "people not listening"; because people didn't take it seriously when alert levels started", etc.

For the second question on who is to blame for Covid-19, coding and labelling of themes followed the same bottom-up technique of deriving codes and themes from the participants' responses. For example, the theme *Asians* was derived from such examples of codes stemming from the participants' responses: "Asians"; "Chinese"; "the Chinese Government"; "China wet markets"; "lax food marketing laws in Asia [China]", etc. For the theme *Nobody is to Blame*, we used the following examples of the participants' responses during coding: "nobody"; "no one is responsible, it just happened"; "no one, it is a pandemic", etc.

As bottom-up thematic analysis involves constructing new codes and themes from the dataset, the choice of particular codes and the process of combining those into themes was discussed during the initial stage of the analysis (Fereday & Muir-Cochrane, 2006). After the initial coding was performed, the two researchers conducted an inter-rater reliability analysis, $\kappa = .84$.

Results and Analysis

Blame Attribution

To explore RQ1, examining to what do New Zealanders assign attribution regarding COVID-19, we identified the following themes: 1) Virus not spread rapidly; 2) Government response; 3) Borders not closed soon enough; 4) People not following the rules; 5) Tourism; 6) Asians; 7) Viruses spread; 8) Many Reasons (including those above); 9) Factors out of our control; 10) Do not know; and 11) Conspiracy. See Table 4 for a breakdown of themes as to why the virus spread.

For who is to blame for COVID-19, we identified the following themes: 1) Asians; 2) Euphemisms for China (or Asians), for example, "animal markets"; 3) People in General; 4) Nobody is to Blame; 5) Irresponsible people and tourists; 6) Political elites/Government; 7) The first person who got it or created it; 8) Nature, including bats, virus, etc.; 9) No point in blaming; 10) Do not know; and 11) Conspiracy. See Table 5 for a breakdown of the themes as to who is to blame for the virus.

The analysis of the open-ended questions shows that close to two thirds of the participants (64%) indicated the spread of COVID -19 in New Zealand was due to the factors associated with greater mobility (e.g. international travel) and open borders that the Governement was not quick to control. At the same time, around 12% insisted there was no 'rapid spread' of COVID -19 in New Zealand, which reflects the perceptions of the efficient Government response at the start of the pandemic. Only a few responses (2%) blamed Chinese or Asians for the spread of COVID -19 in New Zealand, with the vast majority suggesting other factors responsible for that. Also, while tourism and/or international travel was the highest reason indicated in the spread of COVID -19 in New Zealand (25.7%), Chinese and other Asian tourists were not implicated directly in this. This may be due to the perception that New Zealanders also travel internationally and that tourism is seen as a very important part of New Zealand economy and lifestyle.

However, when responding to the question *Who is to blame for COVID-19*, nearly 39% implicated Chinese/Asians, sometimes clearly pointing to "the Chinese Government", "Chinese scientists", or "Wuhan lab". Also, 3.6% used euphemisms for Chinese/Asians, for example, "wild animal markets", "people who eat bats", etc. There were also some responses (5%) that insisted there is no point in blaming, with some participants indicating their overall resistance to the idea of blaming anyone for COVID -19. When combined with straightforward responses "Nobody to blame" (16.6%), "Do not know" (8.8%) and "Nature" (4.6%), over one third (34.9%) of the survey respondents did not assign blame for COVID -19 to any human factors. Across both open-ended questions, only a few responses used the term "Asians", with the rest using more specific identifiers of "China" or "Chinese" or "Wuhan", suggesting more sophisticated knowledge of cultural differences across Asia. New Zealand's close proximity to the Asian region and important trade and tourism connections with its different members and China especially may proved New Zealanders with a higher cultural sensitivity and understanding of the ethnic diversity in the region.

Table 4
Results of Why the Virus Spread in New Zealand

Theme	*n*	%
Tourism	79	25.7%
People Not following Rules	43	14%
Borders not Closed Soon Enough	37	12.1%
Government Response	37	12.1%
Virus did not Spread	37	12.1%
Viruses Spread	24	7.8%
Do not Know	17	5.5%
Factors out of our Control	15	4.9%
Many reasons	9	2.9%
Asians	6	2%
It's a Conspiracy	3	1%

Table 5
Results of Who/What is to Blame for the Virus

Theme	*n*	%
Asians	119	38.8%
Nobody is to Blame	51	16.6%
Do not Know	27	8.8%
Irresponible People (tourists)	23	7.5%
Political Elites/Government	21	6.8%
People in General	19	6.2%
No reason to Blame anyone	15	4.9%
Nature	14	4.6%
Euphemism for Asian	11	3.6%
The first person who got it	5	1.6%
It's a conspiracy	2	.7%

Relationship between ITT and Blame Attribution

In exploring *RQ2* connecting ITT and blame attribution, these data demonstrate that on measures of blame, while there is a clear association for New Zealanders between COVID-19 and China both for realistic and symbolic threat, in both measures that threat in the first two quartiles was less than expected (see Tables 6 and 7). Generally speaking, people attributed blame to a higher degree on people in general and more specifically 'irresponsible' people, including political elites. However, what was also clear in blame attribution was that more people than expected were unsure of who should be blamed for the spread of COVID-19, suggesting that as an event blame attribution remains ambiguous. Overall, there was a significant difference in the Chi-Squares for symbolic threat was significant (χ^2 (30) = 48.01; $p < .05$); however it was not for realistic threat.

However, when it comes to the question of how New Zealanders explained why the virus spread, there is a clearer level of blame attribution on 'outsiders' and the government's response to the disease (see Tables 6 and 7). These findings would suggest that three of the tests for blame attribution could be met – association between particular groups (i.e., outsiders and the government) and the spread of the disease, a potential belief in a lower level of commitment to action or inauthentic concern about the spread of the disease, and questioning the competence of the government to manage the spread of COVID-19. Yet the overall Chi-square tests were not significant.

Table 6

Results of CrossTabs for Blame Attribution and Symbolic, Realistic Threat

Theme	**COUNT/EXPECTED**	**S1**	**S2**	**S3**	**S4**	**R1**	**R2**	**R3**	**R4**
China	Count	30	24	35	30	27	24	33	35
	Expected Count	32.9	26.7	29.5	29.8	29.8	29.8	29.8	29.5
Euphamism for China	Count	<5	<5	5	<5	<5	<5	<5	<5
	Expected Count	3.0	2.5	2.7	2.8	2.8	2.8	2.8	2.7
Humans	Count	6	<5	<5	6	6	<5	<5	7
	Expected Count	5.3	4.3	4.7	4.8	4.8	4.8	4.8	4.7
Nobody	Count	11	14	11	15	11	16	11	13
	Expected Count	14.1	11.5	12.6	12.8	12.8	12.8	12.8	12.6
Irresponsible People	Count	5	10	6	<5	5	10	7	<5
	Expected Count	6.4	5.2	5.7	5.8	5.8	5.8	5.8	5.7
Political Elites	Count	8	<5	<5	6	8	<5	5	5
	Expected Count	5.8	4.7	5.2	6	5.3	5.3	5.3	5.2
First to Spread	Count	<5	<5	<5	<5	<5	<5	<5	<5
	Expected Count	1.4	1.1	1.2	1.3	1.3	1.3	1.3	1.2
Nature	Count	7	<5	<5	<5	<5	<5	5	<5
	Expected Count	3.9	3.1	3.5	3.5	3.5	3.5	3.5	3.5
No Blame	Count	<5	<5	7	6	<5	<5	5	<5
	Expected Count	4.2	3.4	3.7	3.8	3.8	3.8	3.8	3.7
Don’t know	Count	11	7	<5	7	8	6	6	7
	Expected Count	7.5	6.1	6.7	6.8	6.8	6.8	6.8	7
It’s a Hoax	Count	<5	<5	<5	<5	<5	<5	<5	<5
	Expected Count	<5	<5	<5	<5	<5	<5	<5	<5

*S = Symbolic Threat, R = Realistic Threat

Table 7

Results of CrossTabs for Explaining Spread and Symbolic, Realistic Threat

Theme	**Count/Expected**	**S1**	**S2**	**S3**	**S4**	**R1**	**R2**	**R3**	**R4**
It Did Not	Count	6	10	10	11	<5	13	8	12
	Expected Count	10.2	8.3	9.2	9.3	9.3	9.3	9.3	9.2
Gov’t Response	Count	16	<5	5	12	11	6	8	12
	Expected Count	10.2	8.3	9.2	9.3	9.3	9.3	9.3	9.2
Open Borders	Count	16	7	6	8	13	10	5	9
	Expected Count	10.2	8.3	9.2	9.3	9.3	9.3	9.3	9.2
Not Following Rules	Count	11	10	12	10	9	15	12	7
	Expected Count	11.9	9.7	10.6	10.8	10.8	10.8	10.8	10.6
Tourism	Count	21	19	19	20	24	15	18	22
	Expected Count	21.9	17.8	19.6	19.8	19.8	19.8	19.8	19.6
Asians	Count	<5	<5	<5	<5	<5	<5	<5	<5
	Expected Count	1.7	1.3	1.5	1.5	1.5	1.5	1.5	1.5
It’s a Virus	Count	5	<5	10	7	<5	7	9	5
	Expected Count	6.6	5.4	5.9	6.0	6.0	6.0	6.0	5.8
Many Reasons	Count	<5	<5	<5	<5	<5	<5	<5	<5
	Expected Count	2.5	2.0	2.2	2.3	2.3	2.3	2.3	2.2
Out of Our Control	Count	<5	5	8	<5	<5	<5	8	<5
	Expected Count	4.2	3.4	3.7	3.8	3.8	3.8	3.8	3.7
Don’t Know	Count	6	6	<5	<5	6	<5	<5	<5
	Expected Count	4.7	3.8	4.2	4.3	4.3	4.3	4.3	4.2
Virus is a Hoax	Count	<5	<5	<5	<5	<5	<5	<5	<5
	Expected Count	<5	<5	<5	<5	<5	<5	<5	<5

*S = Symbolic Threat, R = Realistic Threat

Relationship between ITT and Fear of COVID-19

In exploring *RQ3,* pearson correlation analysis revealed symbolic threat was significanly correlated with fear of contact with COVID-19 ($r = .13$, $p < .05$) and belief that COVID-19 was a risk to public health ($r = .13$, $p < .05$). Realistic threat was significantly correlated with fear of contact with COVID-19 ($r = .10$, $p < .05$) and belief that COVID-19 was a risk to public health ($r = .12$, $p < .05$). Threat (realistic or symbolic) was not significantly correlated with belief that COVID-19 was a risk to one's personal health. While these correlations are statistically significant, the practical significance is limited and warrants further investigation.

Discussion

This study aims to explore the relationship between ITT and fear of COVID-19, and relationship between blame attribution and prejudice against Asians/Chinese in New Zealand during the pandemic. On the findings on ITT, the results support previous studies that the constructs of ITT can be applied to predict prejudice against people with serious illness such as cancer, HIV/AIDS, etc. On the findings on blame attribution, the results suggest a better understanding of the connection between ITT, blame attribution, and ambiguous situations.

To understand the links between prejudice and blame attribution, this study utilised integrated threat theory (ITT) (Stephan & Stephan, 1996) and identified criteria for identifying blame attribution. Research on prejudice (Allport, 1954; Stephan & Stephan, 1996; Stephan, Stephan, & Gudykunst, 1999) has demonstrated that prejudicial attitudes and behaviors against minorities expose fears and stigma of the in-group (dominant cultural group) toward the out-group (minority group, in this case – Asians). One of the explanatory reasons for these attitudes and behaviors is threat perception. Stephan and Stephan (1996) proposed in their integrated threat theory (ITT) that perceptions of threats are a foundation for understanding, explaining, and predicting prejudicial attitudes and discriminatory incidents against minorities groups (Second Author, 2013). Blame attribution reveals four factors that explain how publics attribute blame to groups and organizations – a litmus test – of clear association, low commitment to the issue, competence to solve the problem, and material blame. A study has showed that when the illness is contagious, people with this illness are likely to be blamed as it is perceived as a great danger of contact (Dukes & Denny, 1995). Moreover, people with illness such as obesity are more likely to be stigmatized and blamed for their own problems (Hoyt et al., 2017). However, during pandemics like COVID-19, where material blame attribution is ambiguous, there is less clarity about how public stigma towards groups may develop and even the degree to which blame attribution may simply be a reflection of the ambiguity of blame.

One of the purposes of this study was to discover the relationship between fear of COVID-19 and ITT in New Zealand. Two general findings provide support for ITT. First, the study showed higher levels of fear of contact with COVID-19 was linked with increased symbolic and realistic threats. Second, the more people believe COVID-19 is a risk to public health, the more symbolic and realistic threats they have. Given that COVID-19 is a highly contagious novel disease, it is seen as a threat to society and public health safety. These results support previous studies that ITT constructs can be used to predict prejudice toward individuals/groups of people with serious illness (i.e., HIV/AIDS, cancer, disabilities, and etc.) (Berrenberg et al., 2002; Bustillos & Silván-Ferrero, 2013). In this study, it is possible that realistic and symbolic threat are applicable constructs to link with fear of a contagious disease (i.e., COVID-19). Furthermore, the findings indicate COVID-19 is a stigmatizing

disease as fear of contact with COVID-19 and belief that COVID-19 is a risk to public health place a strain on perceptions of economic power, well-being, and way of life imposed by Asians/Chinese during the pandemic.

On the other hand, this study aimed to explore the relationship between blame attribution and prejudice toward Asians/Chinese amid the COVID-19 pandemic in New Zealand. This study attributes the findings to blame ambiguous crises/events when it comes to public perceptions of blame amid a global health crisis and blame attribution on the "outsiders" and government's responses to the disease regarding why the virus spread quickly. Particularly, results suggest blame attribution stays ambiguous in a crisis (i.e., COVID-19 pandemic) as more participants than expected in the study responded were unsure of who should be blamed for the spread of COVID-19. Statistically, the result showed realistic threat is linked to blame attribution in the context of the COVID-19 pandemic in New Zealand. Previous studies have indicated that uncertain situations like crises may trigger the attributional activities among individuals (Schwarz, 2012) as publics may have attributions about the responsibility/sense for a crisis (Coombs & Holladay, 1996). This finding supports previous research on attribution theory in ambiguous crises/events (Third Author, 2017) and sheds a new light on exploring the relationship between blame attribution and ITT in other contexts.

In general, on the assumption that COVID-19 is a highly contagious novel disease and a risk to public health, the fear of contact with COVID-19 is positively linked with symbolic and realistic threats in New Zealand. Furthermore, the study has shown there is a link between realistic threat and blame attribution during the pandemic in New Zealand. However, the blame attribution stays ambiguous as participants were not sure who is to blame for the spread of the virus in the context of such a global health crisis in New Zealand.

The findings of this study suggest using ITT as a guideline to predict prejudice in the medical context such as people with serious illnesses. In ambiguous crises/events, it is crucial to explore beyond attribution-based theories to understand public stigma. Perceptions of threat may be linked to blame attribution in a pandemic context. Researchers exploring prejudice and disease have found that when faced with health crises, groups will stigmatise the groups they perceive as threatening their health (Faulkner et al., 2004; Navarette & Fessler, 2006). Such stigmatising has been shown to negatively influence government and community responses to crises (Navarette & Fessler, 2006). Thus, it is critical to understand how groups interact during health/medical crises, such as pandemics, as such interactions can frame government responses.

Limitations and Future Research

One of the potential limitations of the study was the use of the scale on fear of HIV/AIDS adapted for COVID-19. While there are similarities between the atititudes towards both diseases, the nature of COVID-19 is more complex, so the fear of COVID-19 may have different nuances and factors compared to fear of HIV/AIDS. This requires attention in terms of interpreting the findings. At the same time, the fear of contact with COVID-19 may drive prejudice towards specific outgroups, like Asians, and contribute to negative stereotypes, in the same way that fear of HIV/AIDS has contributed to negative stereotyping and prejudice towards specific groups (Second Author et al., 2020). As it is important to understand how fear of COVID-19 leads to prejudice and discrimination, future work should develop a measure for fear of COVID-19. A second potential limitation is that we measured blame attribution via open-ended questions and not quantitatively. While a miced method study,

future research could benefit from measuring all constructs via the same methodological approach.

Another direction for future research is to look into the difference between the responses to the two open-ended questions in terms of attributing blame to Chinese/Asians. While nearly 39% suggested Chinese/Asians can be blamed for COVID-19, only 2% implicated Asians for the spread of COVID-19. This discrepancy warrants a closer investigation into the attitudes towards Chinese and/or Asians in relation to the COVID-19 pandemic.

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