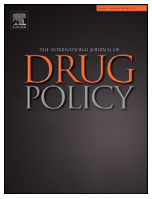
International Journal of Drug Policy 99 (2022) 103442

Contents lists available at ScienceDirect

International Journal of Drug Policy

journal homepage: www.elsevier.com/locate/drugpo



Research paper

Predictors of voter support for the legalization of recreational cannabis use and supply via a national referendum

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ARTICLE INFO

Keywords:
Cannabis legalization
Cannabis referendum
Medicinal cannabis
Morality of cannabis use
New Zealand

ABSTRACT

Background: A national referendum to legalise recreational cannabis use and supply in New Zealand via the Cannabis Legalisation and Control Bill (CLCB) was recently narrowly defeated. Understanding the underlying factors for this result can inform the cannabis legalisation debate in other countries.

Aims: To investigate predictors of voter support for and opposition to the CLCB.

Method: A representative population panel of 1,022 people completed an online survey of intended voting on the CLCB referendum, which included questions on demographics, drug use history, medicinal cannabis, perceptions of the health risk and moral views of cannabis use, political affiliation, religiosity, community size and reading of the CLCB. Regression models were developed to predict support for the CLCB, with additional predictor variables added over successive iterations.

Results: The most robust predictors of support for the CLCB were use of and policy support for medicinal cannabis use, voting for a left-wing political party, having a positive moral view of cannabis use, living in a small town and having read the CLCB. Predictors of opposing the CLCB were voting for right-wing parties, considering "frequent" cannabis use to be a high health risk, and lifetime use of other drugs. Age, ethnicity, education, employment status, religiosity and lifetime cannabis use were not significant predictors after controlling for other variables.

Conclusions: Support for cannabis legalization was not based on broad demographics, but rather specific views concerning the medicinal benefit, morality of cannabis use, health risk of frequent cannabis use, political party affiliation, and knowledge of the proposed regulatory controls of the CLCB. The influence of moral views of cannabis use on voting behaviour suggest the need to debate the right to use cannabis. The importance of knowledge of the proposed regulatory controls of the CLCB on voting underlines the need to raise awareness of proposed regulatory controls during debate.

Introduction

The legalisation of large-scale adult non-medical recreational cannabis use and supply in 15 U.S. States, Canada and Uruguay has reignited the international debate about the best policy approach to cannabis (Decorte, Lenton, & Wilkins, 2020; European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), 2020; Kilmer, 2019). Citizen initiated referenda have been the primary mechanism by which medicinal and recreational cannabis use has been legalised in U.S states over recent decades (Pardo, 2020). Given the politically divisive nature of the cannabis law reform debate, politicians in other jurisdictions may well choose to resolve the issue via referendum in the future, allowing citizens to directly state their preferences and thereby legitimise any policy change (de Vreese, 2007; LeDuc, 2002).

In New Zealand, the Green political party made holding a national referendum on the legal status on recreational cannabis use a condition of their support for the 2017 Labour and New Zealand First coalition government (NZ Herald, 2017; Roper, Hurst, & Bethune, 2021). The resulting 2020 New Zealand cannabis referendum was a world first in the sense that it was a national vote, as opposed to the previous U.S. state referenda, and involved voting on a detailed legislative bill (i.e., the Cannabis Legalisation and Control Bill [CLCB]), rather than a general question on whether cannabis should be legal or not (Pardo, 2020; Roper et al., 2021; Wilkins & Rychert, 2020a). The New Zealand cannabis referendum was narrowly defeated, with 48.4% voting to support compared to 50.7% voting to oppose the CLCB (0.9% of votes were invalid) (Raubenheimer et al., 2021; Rychert & Wilkins, 2021). Along with the notable successes, referenda to legalise non-medical recreational cannabis use and supply have also periodically failed in some U.S. states (Pardo, 2020). The narrow defeat of the New Zealand referendum raises important questions about what factors were respon-

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https://doi.org/10.1016/j.drugpo.2021.103442

sible for the lack of voter support for the CLCB and cannabis legalization in general. Understanding these factors could inform future advocacy and referendum campaigns for cannabis legalisation in other jurisdictions.

The existing literature has identified three main determinants of voting behaviour: self-interest (Weeden & Kurzban, 2017), moral values (Graham, Haidt, & Nosek, 2009), and political party identification (Lewis-Beck, Norpoth, Jacoby, & Weisberg, 2008). Self-interest would predict that users of recreational and medicinal cannabis should support legalisation to remove the risk of arrest to themselves and to reduce social stigma related to their cannabis use. If voting is influenced by moral values, those who view cannabis use as morally wrong should be more likely vote against legalisation, as should those who believe cannabis consumption to be a significant health risk and social harm. If, after controlling for a range of demographic, behavioural and attitude factors, political party affiliation remains a significant predictor of voting intentions related to cannabis legalisation, then this would suggest that similarity in voting amongst members of a party is not only related to shared views of the world, but also by the social identity generated by association with a particular political group (Green, 2004).

Background

In the United States, national support for cannabis legalisation has grown steadily over recent decades, from only 12% in 1969 to 64% in 2017 (Doherty, Tyson, & Weisel, 2015; Resko et al., 2019). Poll support for cannabis legalisation in the U.S. is higher amongst men, younger age cohorts, those who have ever tried cannabis, and left leaning voters (Cohn, Johnson, Rose, Rath, & Villanti, 2017; Doherty, Tyson, & Weisel, 2015; Elder & Greene, 2019; Ellis, Resko, Szechy, Smith, & Early, 2019; Schnabel & Sevell, 2017). Multivariate modelling has found the strongest predictors of support for cannabis legalisation amongst 18–34 year olds in the U.S. are perceptions that cannabis is less harmful than cigarettes and having used cannabis in the past month (Cohn et al., 2017). Male gender remains a significant predictor of support for cannabis legalisation amongst this age group, while age, ethnicity, education, and current social smoking were no longer significant after controlling for other variables (Cohn et al., 2017). Multivariate analysis of state-wide data from Michigan (U.S.) found left of centre or centrist political views, past year cannabis use, and lifetime cannabis use were all predictors of supporting cannabis legalisation (Ellis et al., 2019). Alternatively, older respondents, women, and those who perceived cannabis use to be risky were found less likely to support legalisation (Ellis et al., 2019). Multivariate analysis of U.S. national data found women with greater religiosity less likely to support cannabis legalisation after controlling for a range of variables, suggesting cannabis law reform has an important moral dimension (Elder and Greene 2019). Schnabel and Sevell (2017) come to a similar conclusion from analysing U.S. national poll data from 1988 to 2014, arguing that increasing support for both cannabis legalisation and same sex marriage over recent decades reflects the growing acceptance of these issues as matters of individual autonomy rather than matters for government control.

In New Zealand, public polling on cannabis law reform has been conducted on a fairly regular basis for the past two decades, with as many as 45 polls conducted on the issue since the beginning of the Millennium (Crothers, 2020). These polls have generally found very high levels of support for medicinal cannabis reform, with around two-thirds of respondents supporting some kind of decriminalisation involving civil fines, and only a minority supporting full legalisation of recreational use (Crothers, 2020). Since 2018, public polling has focused more specifically on the question of support for the legalisation of recreational cannabis use, reflecting the coalition government's announcement of the referendum on the issue. Thirteen polls were conducted in the year of the referendum vote, of which seven found a majority in favour of legalisation, five a majority against, and one reported an even result (Crothers, 2020; Radio NZ, 2020; Raubenheimer et al., 2021; STUFF NZ, 2020a; 2020b). A poll of Māori (the indigenous people of Aotearoa/New Zealand) in the same year found 75% in favour of legalisation (Healthnothandcuffs, 2020).

Basic cross tabulations of New Zealand poll results have found higher support for cannabis legalisation amongst men, younger age cohorts, Māori, and Green Party (left-wing party) and Labour Party (centre left-wing party) voters, and alternatively, lower support amongst National (centre right-wing conservative party) voters and those aged over 65 years (Crothers, 2020). The only published multivariate modelling of poll support for cannabis legalisation in New Zealand to date (utilising a long standing longitudinal birth cohort of New Zealanders at age 40) found significant predictors of positive support for cannabis law reform were prior experience of using cannabis and other illegal drugs, a history of depression, scoring higher on a novelty-seeking measure, Māori ethnicity, parental drug use, and higher educational achievement (Boden, Cleland, Dhakal, & Horwood, 2020). Predictors of more negative attitudes to reform amongst this longitudinal sample were female gender and having dependent children (Boden et al., 2020). As acknowledged by the authors, the sample was limited to a single birth cohort of 40-year olds, interviewing was completed prior to the announcement of the cannabis referendum, and the reforms presented to respondents referred to a range of possible liberalisation initiatives, including legalising medicinal cannabis, decriminalisation, permitting home growing, age restrictions and full commercial legalisation (Boden et al., 2020).

The New Zealand cannabis legalisation referendum (i.e., the CLCB) proposed a strictly regulated legal cannabis market that most closely resembled the Canadian approach to cannabis legalisation (Wilkins & Rychert, 2020a). The CLCB would restrict the purchase and use of cannabis to those aged 20 years or older (i.e., 2 years older than the alcohol purchase age in New Zealand); a daily purchase and possession limit of 14 gs; sales from licensed physical stores only (i.e., no mail order or internet sales); separate licensed consumption premises; no advertising or promotion; a personal home cultivation limit of two plants (four plants per household); social sharing of up to 14 g of cannabis; no industry sponsorship or free giveaways; limits on the potency of products (i.e., 15%); an excise tax based on the THC potency and weight of products; mandatory inclusion of health warnings on products and displayed at licensed premises; and no public consumption or sale with alcohol, tobacco, food or any other product (Wilkins & Rychert, 2020a).

Due to conflicting views on cannabis law reform from within the coalition government partners, it was agreed the government would only run what was termed a "signposting" campaign directing voters to the referendum website (referendums.govt.nz) where neutral information would be available, rather than actively campaigning for the passage of the CLCB (Roper, Hurst, & Bethune, 2021; Office of the Minister of Justice, 2019). The referendum site included short bullet point summaries and a complete version of the CLCB (i.e. 148 pages). A brochure on the referendum directing voters to the referendum website was also posted to all enroled voters (approx. 3.5 million). The coalition government purposively left advocacy concerning the relative merits of the CLCB and wider legalisation to interest groups and the media (Roper et al., 2021). In the months preceding the referendum vote, pro- and anti-legalisation interests funded substantial traditional and social media advocacy campaigns, and there was also considerable media coverage of the issue and a series of town hall style public debates (Rychert & Wilkins, 2021). While a number of public polls were conducted to track voter support for the CLCB in the months preceding the referendum, there has been no analysis of what underlying factors explained voter support or opposition to the CLCB.

Method

A representative New Zealand national population panel was invited by the market research company Qualtrics™ to complete an online survey on the cannabis referendum. The panel respondents were anonymous to both Qualtrics™ and the university study team. Market re-

search companies operating around New Zealand provided Qualtrics™ with 1000+ anonymised links to population matched respondents. Potential respondents were first provided with a short description of the survey (e.g., "2020 cannabis referendum survey") and asked if they were willing to participate. If so, their anonymised link was sent to Qualtrics and they were included in the panel that received the survey invitation. Respondents were informed in the survey preamble that the survey was entirely anonymous and their name and contact details were not given to Qualtrics™ or the research team. A total of 1022 people completed the survey between 30 July to 18 August (i.e., approximately a month before the originally scheduled referendum vote on 19 September, subsequently postponed to 17 October due to COVID-19 restrictions). The research was approved by the Massey University Human Ethics Committee: Northern; Application *NOR 20/29*.

Measures

Demographics

Respondents were asked a range of standard demographic questions, including age (years), gender (i.e., female, male, gender diverse), highest educational achievement (i.e., none; primary; high school; polytech; university), main occupation (i.e., student; working; unemployed; sickness benefit; retired/parenting/unpaid work), ethnicity (i.e., Māori; European; Pacific; East Asian; South Asian; Middle Eastern; African), community size (i.e., city; town; rural) and number of dependent children from three age brackets (i.e., <16; 16–20; >20 years).

Political party affiliation

Respondents were asked what political party they intend to vote for in the upcoming general election [i.e., ACT (right-wing); Aotearoa Legalise Cannabis Party (left-wing); Greens (left-wing); Labour (centre left-wing); Māori Party (left-wing); National (centre right-wing); New Zealand First (centre right-wing); Sustainable NZ Party (centre left-wing); TOP (centre right-wing); Don't vote/no political party].

Religion

Respondents were asked if they identified with any religion and/or spiritual group (i.e., Yes; No).

Cannabis and other drug use

Respondents were asked if they had ever tried cannabis for recreational purposes (i.e., Never; Yes, once or twice in the past; Yes, regularly in the past; Yes, in the past six months), and if they had ever tried any other drugs (i.e., Alcohol; Tobacco; Methamphetamine (P); Ecstasy (MDMA); Synthetic cannabinoids; LSD/psychedelics; Morphine/Heroin/homebake; Cocaine; None, Any other drug).

Medicinal cannabis

Respondents were asked to what extent they agree people should have access to cannabis to treat a medical condition (e.g., pain; cancer; palliative care) (i.e., 1 = strongly disagree to 7 = strongly agree), and if they had ever used cannabis to treat a medical condition (i.e., Never; Yes, once or twice in the past; Yes, regularly in the past; Yes, recently in the past six months).

Health risk

Respondents were asked how much of a health risk they think it is – to try cannabis (i.e., 1 = no risk to 7 = very risky), to use cannabis once per week or less often (i.e., 1 = no risk to 7 = very risky), and to use cannabis daily or more often (i.e., 1 = no risk to 7 = very risky).

Moral view of cannabis

Respondents were asked how morally acceptable they personally believe it is to use cannabis recreationally (i.e., 1 = very unacceptable to 7 = very acceptable).

Read the bill

Respondents were asked, Have you read the Government's Cannabis Legalisation and Control Bill? (i.e., No; Yes, read short summaries and media articles; Yes, skim read parts of Bill; Yes, carefully read whole Bill).

Voting on the bill

Respondents were asked, Do you support the proposed Cannabis Legalisation and Control Bill? (i.e., Yes; No, Don't know).

Analysis

A series of logistic regression models were developed to predict positive support for the CLCB (i.e., "yes" as opposed to "no"/"don't know"), first to identify statistically significant demographic predictors, then to establish the importance of underlying behaviours and beliefs. Some categories were combined in the model due to small numbers of observations. For education, "None" and "Primary/Intermediate" were grouped with "High School". For political voting, ACT, Greens, Labour, NZ First, and National were coded in their existing categories, while all other party categories were combined as "Other party/Don't Vote". Medical use of cannabis was entered as a dummy variable indicating any past use. Reading the Bill was also entered as a dummy variable, indicating any response other than "No" reading. Age and income were included as continuous variables (in years, and brackets of $10,000 up to $150,000+, respectively). Experience with cannabis use was included as a continuous variable (1 = never; 2 = yes, once or twice in the past; 3 = yes, regularly in the past; 4 = yes, in the past six months). Having ever tried an illegal drug (other than cannabis) was include as dummy variable. All Likert scale variables were included as continuous variables from one to seven.

Results

Support for the CLCB

Overall, 46% of the sample indicated they would support the CLCB, 41% opposed it, and 13% "did not know" how they would vote.

Demographics

Fifty-two percent of the sample was female, the median age was 46 years (mean 46, range 18–84, s.d. 17), 21% were Māori, 41% were university educated, 61% were employed, 68% lived in a city, 61% had dependent children, and 39% identified with a religious or spiritual group (Table 1). Higher support for the CLCB was reported amongst younger cohorts, Māori, sickness beneficiaries, students and unemployed, and those with no children (Table 1).

Political affiliation

Fifty-five percent of the sample reported an intention to vote for Labour, 21% National, 6% Greens, 4% ACT, 3% New Zealand First, and 2% Aotearoa Legalise Cannabis Party. Support for the CLCB was high amongst those who intended to vote for the Aotearoa Legalise Cannabis Party, Greens, TOP and Māori Party.

Table 1
Descriptive results and cross tabulations by intention to vote for the CLCB.

Variable		% sample (n = 1022)	Positive support for CLCB
Age	18–25	14.8%	69.1%
	26–45	34.4%	57.1%
	46–65	34.2%	47.9%
	65+	16.7%	39.2%
Gender	Male	48%	53.3%
	Female	51.7%	51.9%
	Gender diverse	0.4%	100.0%
Highest level of educational achievement	None	1.3%	54.6%
	Primary/intermediate	0.9%	55.6%
	High school	29.7%	56.1%
	Polytech/technical/trade school	25.3%	58.6%
	University	41.3%	46.8%
	Other	1.6%	53.9%
Main occupation	Student	6.9%	67.2%
	Working	60.6%	52.5%
	Unemployed	8.1%	61.2%
	Sickness benefit	3.8%	75%
	Retired/parenting/unpaid work	20.7%	41.5%
Ethnicity	NZ European	52.6%	53.9%
	Māori	21%	69.9%
	Pacific	3.7%	54.6%
	East Asian	11.5%	31.3%
	South Asian	7.9%	31.5%
	Other	3.2%	50.0%
Age of youngest child	No children	39.3%	59.5%
	>20	39.8%	45.5%
	16–20	3.6%	30.0%
	<16	27.2%	54.3%
Community size	City	68.4%	49.5%
	Town	23.1%	62.8%
	Rural	8.5%	53.4%
Intended political party vote	ACT	4.2%	41.0%
	Aotearoa Legalise Cannabis Party	1.6%	100%
	Greens	5.8%	90.9%
	Labour	54.5%	58.7%
	Maori Party	1.2%	85.7%
	National	21.2%	26.7%
	New Zealand First	2.8%	65.4%
	The Opportunities Party (TOP)	0.9%	88.9%
	Other / Don't vote	3.9%	34.5%
	Don't vote/no political party	4.0%	37.1%
Religious	No	61.3%	60.3%
	Yes	38.8%	41.1%
Household's combined annual income (before tax)	$20,000 NZD or less	9.4%	63.0%
	$20,001 to 30,000	6.8%	61.0%
	$30,001 to 50,000	18.5%	47.7%
	$50,001 to 70,000	16.9%	54.3%
	$70,001 to 100,000	17.6%	51.9%
	Over 100,0000	30.8%	50.9%
Cannabis use experience	Never	47.1%	30.1%
	Once or twice in the past	31.5%	62.9%
	Regularly in the past	14.2%	77.8%
	In the past six months	7.2%	94.3%
Ever tried other illegal drug	Yes	19.0%	80.8%
	No	82.0%	46.1%
Health risk to try	Low risk (score 3 or less)	45.2%	76.1%
	Neutral (score 4)	18.6%	53.8%
	High risk (score 5 or more)	26.2%	23.5%
Health risk to use weekly or less	Low risk (score 3 or less)	40.9%	82.3%
	Neutral (score 4)	17.0%	62.3%
	High risk (score 5 or more)	42.1%	20.7%
Health risk to use daily	Low risk (score 3 or less)	18.7%	90.9%
	Neutral (score 4)	11.1%	82.1%
	High risk (score 5 or more)	70.3%	37.6%
Access for medical use	Disagree (score 3 or less)	8.5%	18%
	Neutral (score 4)	8.4%	20.8%
	Agree (score 5 or more)	83.1%	59.6%
Own medical cannabis use	Never	85.5%	45.9%
	Once or twice in the past	8.4%	90.7%
	Regularly in the past	3.6%	93.8%
	In the past six months	2.5%	96.0%
Personal moral view of use	Unacceptable (score 3 or less)	45.8%	18.2%
	Neutral (score 4)	15.3%	64%
	Acceptable (score 5 or more)	38.9%	89.3%

(*continued on next page*)

Table 1 (*continued*)

Variable		% sample (n = 1022)	Positive support for CLCB
Read Bill	No	40.4%	46.9%
	Summaries of CLCB	43.0%	53.0%
	Parts of CLCB	12.5%	66.7%
	Whole CLCB	4.1%	61.0%

Drug use experience

Fifty-three percent of the sample had tried cannabis and 19% had tried another illegal drug at some point in their lives. Support for the CLCB was higher amongst those who had tried cannabis and other drugs.

Perceptions of health risk

Forty-five percent of the sample considered "trying" cannabis be to be a low health risk (i.e., scored 3 or less on a 7-point scale of health risk). Forty-one percent also considered using cannabis "weekly or less often" to be a low health risk. Only 19% considered using cannabis "daily or more often" to be a low health risk. Support for the CLCB was higher amongst those who considered cannabis use to be a low health risk.

Medicinal use

Fourteen percent of the sample had used cannabis medicinally at some point in their lives, and 83% supported (scored 5 or more on a 7-point scale) people having legal access to cannabis to treat medical conditions. Support for the CLCB was higher amongst those who had personally used cannabis for medicinal reasons and who agreed people should have access to medicinal cannabis.

Moral views of cannabis use

Forty-six percent of the sample believed it was not morally acceptable to use cannabis (i.e., scored 3 or less on a 7-point scale). Support for the CLCB was higher amongst those who believed cannabis use was morally acceptable.

Read the bill

Sixty percent of the sample had read the CLCB, of which 43% had read short summaries and media articles, 13% had "skimmed" parts of the Bill, and 4% had "carefully read the whole Bill". Support for the CLCB was higher amongst those who had read the CLCB.

Multivariate predictors of support for the CLCB

Table 2 presents the logistic regressions predicting support for the CLCB. Those respondents who answered, "don't know" (n = 139), to the question about whether they supported the CLCB are not included in the models. The first model only includes demographics, political affiliation, and religiosity. Voting for the Green Party, living in a small town, and Māori ethnicity are statistically significant predictors of supporting the CLCB. Conversely, South and East Asian ethnicity, having a dependent child aged 16–20 years, voting for the National Party (right wing conservative), identifying as religious or spiritual, and older age are predictors of not supporting the CLCB. Females were less likely to support the CLCB (OR = 0.771), but the influence of being female was not statistically significant (p = 0.115). Even if religious identification was dropped from the first model, female gender was still not a statistically significant predictor of supporting the CLCB. On closer inspection, we see that there is a large gender difference in support in the youngest age group (18–25 year olds) with men 17% higher than women to vote for the CLCB, but a negligible difference in older age brackets. Adding an age-gender interaction term to the first model finds a negative coefficient amongst females (p = 0.025), with the interaction effect positive and weakly significant (p = 0.071). Both remain weakly significant in the remaining specifications. The inclusion of the interaction term does not qualitatively affect the other results.

Model 2 adds lifetime experience of cannabis and other illegal drug use. Lifetime experience of cannabis use predicts support for the CLCB, while lifetime use of other illegal drugs is not statistically significant at this stage. In addition, all ethnicity variables are no longer significant. Also, note, adding lifetime experience of cannabis and other illegal drug use further reduces the influence of female gender. Adding cannabis and other drug use experience also means that voting for the ACT Party becomes a significant predictor of not supporting the CLCB, while the existing influence of other political party affiliations remain unaffected.

Model 3 adds perceptions of the health risk of different frequencies of cannabis use. Considering "weekly" and "daily" cannabis use to be a high health risk are both predictors of not supporting the CLCB, while merely trying cannabis is not a statistically significant predictor. The addition of perceptions of the health risk of cannabis use leads to age and religiosity no longer being significant.

Model 4 adds personal experience of medicinal cannabis use and support for allowing medicinal cannabis use. Both are significant predictors of support for the CLCB, with personal medicinal cannabis use a particularly strong predictor. The inclusion of the medicinal cannabis use and policy agreement variables leads to cannabis use experience no longer being significant.

Model 5 adds respondents' personal moral view of cannabis use. Higher moral acceptability of cannabis use is a predictor of support for the CLCB. Including moral acceptability leads to having a child aged 16–20 no longer being significant, while having ever tried other drugs becomes a significant predictor of not supporting the CLCB. The final model adds the variable – whether or not a participant has read any part of the CLCB (i.e., summaries or the whole version). Having read the bill is a predictor of support for the CLCB.

Discussion

Our models found that age, ethnicity, education, religiosity and even cannabis use experience were no longer statistically significant predictors of support for the CLCB once we controlled for perceptions of the health risk of cannabis use, experience with and support for medicinal cannabis use, moral views of cannabis use, and actual reading of the CLCB. This suggests support for recreational cannabis legalisation in New Zealand is not based on broad demographic characteristics, but rather specific views about the moral acceptability, health risk and medicinal benefits of cannabis use, and deep-rooted ideological perspectives.

Elder and Greene (2019) found that religiosity played an important role in women's opposition to cannabis legalisation after controlling for a range of variables, suggesting that cannabis legalisation has a prominent moral dimension for some people, similar to issues such as access to pornography and abortion. Elder and Greene (2019) included measures of religious *commitment* in their models, that is frequency of religious attendance (0 = never attends to 6 = attends more than once a week) and describing oneself as "born again" Christian. Our measure of religiosity (i.e., Do you identify with a religion and/or spiritual group?)

Table 2
Logistic regression models predicting support for the CLCB.

Model	1	2	3	4	5	6
	n = 883	n = 883	n = 883	n = 883	n = 883	n = 883
Variables	Odds ratio	Odds ratio	Odds ratio	Odds ratio	Odds ratio	Odds ratio
Age	0.972***	0.976***	1.002	1.000	1.005	1.007
Female	0.771	0.847	0.953	0.841	0.937	0.898
Education (base category = High School or lower)						
Polytech	1.099	1.235	1.646*	1.600*	1.477	1.385
University	0.859	1.020	1.256	1.125	1.209	1.096
Employment status (base category = Employed)						
Student	1.075	1.320	1.466	1.287	1.313	1.248
Unemployed	0.999	0.786	0.716	0.624	0.452	0.431
Sickness	1.724	1.155	0.769	0.669	0.579	0.543
Unpaid/Parenting/Retired	0.991	1.265	1.120	1.183	1.496	1.397
Ethnicity (base category = NZ European)						
Māori	1.753***	1.333	0.895	0.788	0.574*	0.623
Pacific Islander	1.030	0.880	0.965	1.141	1.142	1.309
East Asian	0.497**	0.860	0.757	0.997	0.847	0.876
South Asian	0.409***	0.694	0.506*	0.533	0.491	0.542
Other ethnicity	0.810	0.792	1.452	1.532	1.677	1.832
Children (base category = None)						
Only adult children	1.063	1.079	0.729	0.692	0.701	0.676
Youngest child (16–20)	0.444*	0.359**	0.293**	0.251**	0.421	0.400
Youngest child (< 16)	0.851	0.723	0.635*	0.680	0.954	0.953
Residential location (base category = City)						
Small town	1.932***	1.821***	1.786**	1.837**	2.013**	1.931**
Rural	1.150	1.292	1.075	0.917	0.828	0.802
Party support (base category = Labour party)						
ACT voter	0.633	0.468*	0.394**	0.373**	0.318**	0.281**
Green voter	4.387***	3.631**	4.720***	4.948***	3.713*	3.508*
National voter	0.304***	0.320***	0.342***	0.339***	0.348***	0.326***
NZ First voter	1.606	1.725	1.566	1.356	1.088	1.012
Other Party / Don't vote	0.732	0.540**	0.570*	0.581	0.595	0.609
Religious identification	0.527***	0.593***	0.818	0.769	0.923	0.890
Income	1.021	1.009	1.008	0.997	0.979	0.976
Experience with cannabis		2.606***	1.662***	1.261	1.067	1.089
Ever tried other illegal drug		1.376	0.932	0.815	0.429**	0.413**
Health risk to try cannabis			0.890	0.880	0.989	0.974
Health risk to use cannabis weekly or less often			0.706***	0.778**	0.879	0.871
Health risk to use cannabis daily or more often			0.592***	0.570***	0.600***	0.602***
Agree to medical cannabis use				1.508***	1.323***	1.286***
Used cannabis for medicinal purpose				6.119***	4.768***	4.814***
Personal moral view of cannabis use					2.121***	2.136***
Read CLCB						1.823**

*** $p<0.01$.
** $p<0.05$.
* $p<0.1$.

covered a broad range of spiritual and religious beliefs, some of which may not hold as strong anti-drug prescriptions as evangelical Christians in the U.S. In addition, our religiosity variable was a simple yes/no response, and thus may not have captured the intensity of religious belief as Elder and Greene's (2019) measures.

One of strongest predictors of supporting the CLCB was personal experience of medicinal cannabis use. Experience of the medicinal benefits of cannabis has also been found to be one of the leading reasons for supporting recreational cannabis legalisation in the U.S. (Doherty, Tyson, & Weisel, 2015; Resko et al., 2019). A recent survey of medicinal cannabis users in New Zealand found the overwhelming majority reported positive therapeutic benefits from their cannabis use (Rychert, Wilkins, Parker, & Graydon-Guy, 2020), and this positive experience is likely to mean this group has fewer qualms about supporting recreational cannabis legalisation. During the referendum, opponents of the CLCB strongly objected to a pro-campaign promotion that referred to the CLCB as a means to obtain greater access to cannabis for medicinal purposes, pointing out that medicinal use had already been recently legalised in New Zealand [via the Misuse of Drugs (Medicinal Cannabis) Regulations 2019]. In contrast, pro-legalisation campaigners argued there is significant overlap between recreational and medicinal use, and that the current New Zealand medicinal regime is too strict to facilitate all forms of cannabis use for medical and wellbeing. In addition, implementation of the New Zealand Medicinal Cannabis Scheme has been slow with no products approved under the scheme to date (Rychert et al., 2020). Kilmer and MacCoun (2017) have argued that in the U.S. the legalisation of medicinal cannabis facilitated the subsequent passage of recreational law reform in a number of ways, but it takes time and exposure to the new legal medical market before public perceptions and other forces improve conditions for recreational law reform.

Another strong predictor of supporting the CLCB was the intention to vote for the Green political party. This is understandable given the central role the Green Party played in negotiating for the referendum to be held, and their long history of advocacy for cannabis law reform in New Zealand, including the pioneering Rastafarian Green MP Nandor Tanczos, and prominent role of Green MP Chloe Swarbrick in the pro-referendum campaign for the CLCB. As outlined earlier, support for cannabis legalisation in the U.S. has also been found to be consistently higher amongst left and centre left voters (Elder & Greene, 2019; Ellis et al., 2019).

The strong support for the CLCB amongst those who live in small towns is more difficult to interpret. Large-scale outdoor illegal cannabis

cultivation has been common in some rural regions of New Zealand for decades, and this activity has been associated with gang activity, arson, property vandalism and exclusion zones where residents are afraid to visit for fear of growers and improvised security devices (Walker, Cocklin, & Blunden., 1998; Wilkins & Casswell, 2003). Those living in small towns may view legalisation as a means to resolve these problems through permitting legal regulated cannabis cultivation. Illegal cannabis cultivation has also been identified as a critical source of seasonal income in some economically depressed rural regions in New Zealand, generating hundreds of millions of dollars per year (Wilkins, Reilly, Pledger, & Casswell, 2005), and legalisation may be viewed as a means to transition this illegal activity to legitimate economic development. BERL, an economic consultancy firm tasked by the New Zealand Ministry of Justice to model the impacts of the CLCB, estimated that the legal cannabis sector facilitated by the CLCB would create 5000 full-time jobs, representing wages and salaries of $210 million per year, and contribute $440 million to GDP (BERL, 2019). One rurally based Māori medicinal cannabis company has been established with these development and employment goals in mind (Rua Bioscience, 2020).

Conversely, there was strong opposition to the CLCB amongst right leaning voters in New Zealand (i.e., National and ACT voters), again consistent with findings from the U.S (Elder & Greene, 2019; Ellis et al., 2019). The opposition of National Party voters is understandable given the party's traditional right-wing conservative base. The opposition of ACT voters is, on the face of it, less easy to understand given ACT describes itself as a "classical liberalism" political party that promotes "individual choice" and "small government". These economically conservative values should presumably favour cannabis legalisation. However, economic conservatives in Western democracies often adopt conservative views on not only economic issues but also social issues to more closely align themselves with their socially conservative allies (Federico & Malka, 2018).

We also found an association between considering frequent cannabis use to be a high health risk and not supporting the CLCB. The health risks of cannabis use are also cited in the U.S. as a leading reason to oppose legalisation (Ellis et al., 2019; Resko et al., 2019; Rudy, Barnes, Cobb, & Nicksic, 2020). It is interesting to note that perceptions of the health risk of *frequent* cannabis use (i.e., "daily or more often"), as opposed to merely "trying" or "using cannabis weekly or less often", is the dominant predictor. This suggests there is a somewhat nuanced understanding of the health risks of cannabis, consistent with the findings from New Zealand longitudinal research (Fergusson, Boden, & Horwood, 2015).

Those who had tried illegal drugs other than cannabis in their lifetimes were more likely to oppose the CLCB once we controlled for moral views of cannabis use. Recent use of other drug types has also been found to be associated with opposition to cannabis legalisation amongst young adults in the U.S. (Cohn et al., 2017). This may represent specific concerns or views about cannabis, as opposed to other drug types. Lifetime experience of other illegal drug use may include those who have experienced negative experiences from drug use in the past, and this may translate into opposition to drug liberalisation in the present. In the U.S., a lack of support for cannabis legalisation in some counties has been explained by high levels of illegal cannabis cultivation in these areas and the desire to maintain black market income streams (Stoa, 2017).

Finally, we found that reading summaries, parts of, or the whole CLCB was a significant predictor of support for the bill. It appears that knowledge of the regulatory controls of the legal cannabis market proposed in the CLCB increased the likelihood respondents would support legalisation. However, the causality of this association can be questioned. One interpretation is people were convinced to support the CLCB once they actually read the Bill's content. An alternative explanation is that those already positively inclined to support legalisation were more likely to spend time reading the CLCB, and thus the details merely served to reinforce their pre-existing voting intentions.

Limitations

Qualtrics™ invited a representative population panel sample to complete the online survey based on New Zealand census characteristics, but inevitably the panel sample that agree to and completed the survey differed in some respects from the general New Zealand population. Direct comparisons of the demographic characteristics of the survey panel with the most recent 2018 New Zealand population census are problematic due to differences in questions and answer categories (Stats NZ, 2020). The panel sample had a higher proportion than the census of Māori (21% vs. 17%) and Asian people (19% vs. 15%) (Stats NZ, 2020). The panel sample had similar proportion as the census of employed (61% vs. 64%), students/retired/sick (31% vs. 31%), but a higher proportion of unemployed (8% v. 4%) (Stats NZ, 2020). The panel sample had a higher proportion than the census of respondents without children (39% vs. 32%) and a similar proportion with no religious affliation (61% vs. 60%) (Stats NZ, 2020). The voting intentions reported by the panel respondents broadly resembled the actual 2020 election results (i.e. 55% vs. 50% Labour, 21% vs. 26% National, 6% vs. 8% Greens, 4% vs. 8% ACT, 3% vs. 3% New Zealand First, and 2% vs. 1% Aotearoa Legalise Cannabis Party).

It is important to note that because we are interested in differences between groups in support for cannabis legalisation rather than estimating levels of support in particular groups, self-selection into our online survey is unlikely to affect our regression results. For example, our estimate of a gender effect would not be biased due to self-selection if either pro-cannabis voters or females are more or less likely to respond to the survey, but only if the strength of self-selection by pro-cannabis voters is different for males and females after controlling for age, education, and the other covariates we include in our regressions.

Finally, the online survey could only be completed by those who had access to the internet. Rates of digital engagement in New Zealand are high by international standards, with 90% of the New Zealand population having internet access (New Zealand Government, 2021). This rate is higher for Asian New Zealanders (97%), but slightly lower for Pasifika (89%) and Māori (87%) (New Zealand Government, 2021).

Conclusions

We found support for cannabis legalization in the New Zealand cannabis referendum was not based on broad demographics, but rather specific views concerning the medicinal benefit, morality of cannabis use, health risk of frequent cannabis use, political party affiliation, and knowledge of the proposed regulatory controls of the CLCB.

The strong influence of moral views of cannabis use on referendum voting behaviour suggests the need to debate the right to use cannabis leading up to any vote. The New Zealand referendum debate largely featured academics and professionals discussing the wider health, criminal justice, and economic consequences of cannabis legalisation (Rychert & Wilkins, 2021). Arguments for or against the right to use cannabis, along with the voices of cannabis activists and current cannabis users, were noticeably absent (Rychert & Wilkins, 2020). A rights-based debate on cannabis use may cover topics such as the limits of personal freedom, harms imposed on others, consistency with alcohol and tobacco and other drug laws, and proportionate penalties for cannabis use (MacCoun & Reuter, 2001). The debate may also extend to the morality of the current prohibition approach and its enforcement, particularly with respect to negative impacts on ethnic minorities and youth (American Civil Liberties Union, 2013; Fergusson, Swain-Campbell, & Horwood, 2003).

The importance of the knowledge of the proposed regulatory controls of the legal cannabis market on voting behaviour underlines the need to raise awareness of these proposed regulatory frameworks during referendum debate. As outlined earlier, in New Zealand the coalition government chose not to actively campaign for a "yes" vote in the CLCB referendum, and furthermore, only directed the public to the referendum website where neutral information was available on the CLCB

(Rychert & Wilkins, 2021). This self-imposed neutrality left wider questions concerning the proposed regulation and enforcement of the new legal cannabis sector (beyond the specific details of the CLCB) largely unanswered (Wilkins & Rychert, 2020b), and may have been a significant factor in the narrow defeat of the CLCB (Rychert & Wilkins, 2021). More active dissemination and communication of the proposed regulatory controls of the CLCB designed to address the harms from cannabis use and risk of commercialisation may have closed the narrow gap in support.

Declarations of Interest

None.

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