

# Demographic and psychological correlates of New Zealanders' support for euthanasia

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## ABSTRACT

**AIMS:** To explore the distribution of New Zealanders' support towards the legalisation of euthanasia and examine demographic and psychological factors associated with these attitudes.

**METHODS:** 15,822 participants responded to the 2014/15 New Zealand Attitudes and Values Study (NZAVS) survey. This survey included an item on people's attitudes towards euthanasia, and information on their demographic and psychological characteristics.

**RESULTS:** The majority of New Zealanders expressed support for euthanasia, which was assessed by asking "Suppose a person has a painful incurable disease. Do you think that doctors should be allowed by law to end the patient's life if the patient requests it?" Non-religious, liberal, younger, employed, non-parents and those living in rural areas were more supportive. Those of Pacific or Asian ethnicity, with lower income and higher deprivation, education and socio-economic status were less supportive. Furthermore, those high on extraversion, conscientiousness and neuroticism showed more support, while those high on agreeableness and honesty-humility exhibited less support.

**CONCLUSION:** There is strong public support for euthanasia when people are asked whether doctors should be allowed by law to end the life of a patient with a painful incurable disease upon their request. There are reliable demographic and personality differences in support for euthanasia.

Whether or not doctors should be legally permitted to end the life of a suffering patient remains a controversial issue around the world.<sup>1,2</sup> Although the practice of euthanasia has been legalised in some countries (eg Belgium and Luxembourg), there is continuing debate regarding the morality and practicality of such legislation.<sup>3,4</sup> In New Zealand, the "Death with Dignity Bill" was put forward in both 1995 and 2003 but failed to pass.<sup>3</sup> The 2012 "End of Life Choice Bill" was also unsuccessful.<sup>3</sup> Despite this repeated failure, polls indicate that the majority of New Zealanders tend to support the right of patients to make end-of-life choices.<sup>3,5</sup> This on-going debate regarding the legalisation of euthanasia suggests that research tracking New Zealanders' attitudes toward euthanasia is essential.

'Euthanasia' refers to the administering of a death-causing or hastening act on a person suffering from an incurable or

painful disease as a means of mercy.<sup>6</sup> Advocates of euthanasia invoke the argument of human dignity, in that individuals should have the autonomy to make decisions regarding their own death.<sup>4,7</sup> Conversely, opponents claim that euthanasia is no different to murder, has high potential for abuse and emphasise the sanctity of human life.<sup>4,7</sup> Nevertheless, support for euthanasia appears to be on the rise in many countries.<sup>1,8</sup> To illustrate, a Horizon Research study on 2,969 adult New Zealanders in 2012 found that around 63% of respondents supported the right of patients to make end-of-life decisions.<sup>5</sup> Subsequently, a study by Rae et al on 677 New Zealanders found that 82% of respondents supported the legalisation of euthanasia.<sup>3</sup> However, many believed that only patients suffering from severe pain, loss of dignity and with little hope of recovery should be given the choice of hastening death.<sup>5</sup>

Previous studies have also examined links between various demographic and psychological factors with people’s attitudes towards euthanasia. In general, individuals who are younger, non-religious, of higher socio-economic status and more educated tend to support euthanasia.<sup>4,9,10</sup> In terms of personality (see Table 1 for definitions of the core ‘Big-Six’ personality traits), studies on American and Iranian samples found that individuals high on openness to experience exhibited more support, while those high on honesty-humility and agreeableness exhibited less support for euthanasia.<sup>11,12</sup>

However, there were some cross-cultural differences in results. For instance, agreeableness was significant in the Iranian but not the American sample.<sup>11,12</sup> Similarly, a study on European countries found that younger individuals,<sup>10</sup> while a study on a Chinese sample found that older individuals, were more supportive of euthanasia.<sup>9</sup> This suggests that culture or national history may have important influences on people’s perceptions of euthanasia.

In the context of New Zealand, Horizon Research found that support for euthanasia was highest among European and Māori individuals, and those aged 45–54.<sup>3</sup> Contrastingly, Rae et al reported that younger Māori individuals and those indicating an “other” ethnicity (not European, Pacific, Māori or Asian) were less supportive of euthanasia.<sup>3</sup> Further, religious people showed less support.<sup>3</sup> Given these mixed findings, the demographic factors associated with support for euthanasia in New Zealand remain unclear. Extending on these studies, we use a large nationally representative probability sample of New Zealanders to assess the distribution of support for euthanasia, and more importantly, explore how these attitudes are associated with a broad range of demographic and psychological factors. These include gender, age, household income, deprivation, education, employment status, the Big-Six personality traits and political orientation. This provides an important cross-sectional ‘snapshot’ on the level of support for euthanasia in the New Zealand adult population in 2014/15.

**Table 1:** Interpretation of each Mini-IPIP6 factor, including example traits, and likely adaptive benefit and costs resulting from high levels of each personality dimension (adapted from Sibley et al,<sup>13</sup> p. 144, which was in turn adapted from Ashton and Lee<sup>14</sup> p. 156).

Factor	Interpretation	Example traits	Likely adaptive benefits of high levels (in evolutionary history)	Likely costs of high level (in evolutionary history)
Extraversion	Engagement in social endeavours	Sociability, leadership, exhibition	Social gains (friends, mates, allies)	Energy and time; risks from social environment
Agreeableness	Ingroup co-operation and tolerance; reciprocal altruism in HEXACO model	Tolerance, forgiveness, (low) quarrelsomeness	Gains from cooperation, primarily with ingroup (mutual help and nonaggression)	Losses due to increased risk of exploitation in short-term exchanges
Conscientiousness	Engagement in task-related endeavours	Diligence, organisation, attention to detail	Material gains (improved use of resources), reduced risk	Energy and time; risks from social environment
Neuroticism (low emotional stability)	Monitoring of inclusionary status and attachment relations; kin altruism in HEXACO model	Anxiety, insecurity, (low) calmness	Maintenance of attachment relations; survival of kin in HEXACO model	Loss of potential gains associated with risks to attachment relations.
Openness to experience	Engagement in ideas-related endeavours	Curiosity, imaginative-ness, (low) need for cognitive closure and (low) need for certainty	Material and social gains (resulting from discovery)	Energy and time; risks from social and natural environment
Honesty-humility	Reciprocal altruism (fairness)	Fairness, sincerity, (low) entitlement and (low) narcissism	Gains from co-operation, (mutual help and non-aggression)	Loss of potential gains that would result from the exploitation of others (and in particular outgroup members)

## Method

### Sampling procedure

We used the sixth wave of the (2014/15) NZAVS, which contained responses from 15,822 participants (15,740 retained from one or more previous waves, and 82 unmatched participants or unsolicited opt-ins). The initial Time 1 (2009) NZAVS recruited participants by randomly selecting samples from the New Zealand electoral roll (a national registry of registered voters). A booster sample was later recruited at Time 3 (2011) through an unrelated survey posted on the website of a major New Zealand newspaper. Further booster samples were recruited from the 2012 and 2014 Electoral Roll in subsequent time periods (see online technical document for more details).<sup>15</sup>

### Participants

Fifteen thousand eight hundred and twenty-two participants (10,002 female, 5,800 male) completed the NZAVS Time 6 questionnaire. Participants had a mean household income of NZ \$108,277 ( $SD = 119,918.47$ ; 1,143 missing cases). Participants had a mean age of 49.34 years ( $SD = 14.04$ , range 18–95; nine missing cases). With regard to other demographics, 39.8% (674 missing cases) were religious, 74.6% (259 missing cases) were parents, 74.7% (640 missing cases) were in a committed romantic relationship, 77% (188 missing cases) were employed and 67% (209 missing cases) lived in an urban area (as opposed to a rural area of New Zealand). Education (1,114 missing cases) was coded as a 10-point ordinal variable ranging from 0 (none) to 10 (PhD/ equivalent degree) following the standard New Zealand Qualifications Authority (2012) framework for coding ( $M = 5.05$ ,  $SD = 2.85$ ).

### Measures

Support for the legalisation of euthanasia in New Zealand were measured using the item:

“Suppose a person has a painful incurable disease. Do you think that doctors should be allowed by law to end the patient’s life if the patient requests it” rated on a Likert scale from 1 (definitely no) to 7 (definitely yes). This item was modelled on the British Social Attitudes Survey, which included this item with a yes/no response option.<sup>16</sup> We used this single item as an indicator of a continuous latent attitude trait (sample weighted  $M = 5.51$ ,  $SD = 1.91$ , unweighted  $M = 5.61$ ,  $SD = 1.85$ ).

As presented in Table 2, for descriptive purposes, the following scale ranges were used to describe pro-euthanasia (ratings of 6–7; weighted 66% of sample, unweighted 68.3% of sample), neutral/unsure (ratings of 3–5; weighted 21.7% of sample, unweighted 20.6% of sample) and anti-euthanasia (ratings of 1–2; weighted 12.3% of sample, unweighted 11.1% of sample) in this study. The weighting procedure weighted men and women from each of the four primary ethnic groups separately as well as region of residence based on data from the 2013 New Zealand Census (See technical document for further details).<sup>17</sup>

Big-Six Personality traits were measured using the Mini-IPIP6.<sup>18</sup> Deprivation was measured using the 2013 New Zealand Deprivation Index.<sup>19</sup> Political orientation was measured on a 7 point Likert scale (1 = extremely liberal; 7 = extremely conservative).<sup>20</sup> Socio-economic status was measured using the measure of socio-economic status based on occupation developed by Milne, Byun and Lee.<sup>21</sup>

**Table 2:** Definitions of groups by support for euthanasia and operationalisation in this study.

Euthanasia attitudes	Definition	Operationalisation
<i>Pro-euthanasia</i>	Those who express support for the legalisation of euthanasia in New Zealand, usually paired with values of human dignity	Ratings of 6 or 7 on a 7-point scale assessing agreement that doctors should be allowed by law to end the life of a patient suffering from a painful and incurable disease upon their request
<i>Neutral/unsure</i>	Neutral or undecided attitudes toward the legislation of euthanasia	Ratings of 3 to 5 on the same scale as above
<i>Anti-euthanasia</i>	Strong opposition towards the legislation of euthanasia, usually paired with negative views regarding the morality and practicality of euthanasia	Ratings of 1 or 2 on the same scale as above

## Statistical analyses

We conducted a multiple regression examining the concurrent association between various demographic and psychological variables with New Zealanders' support for the legalisation of euthanasia. We estimated the model-implied difference in levels of support for euthanasia associated with a one-unit increase in each demographic or personality variable, holding all other covariates constant.

Missing data for exogenous variables were estimated using Rubin's procedure for multiple imputation procedure with parameter estimates averaged over 10,000

datasets (thinned using every 200<sup>th</sup> iteration).<sup>23</sup> Our model explained 17% of the variance in attitudes towards euthanasia ( $p < .001$ ).

## Results

### Regression model predicting support for euthanasia

**Demographic factors.** As shown in Table 3, compared to those who were non-religious, religious people showed less support for the legalisation of euthanasia ( $b = -1.158$ ). Age showed a negative curvilinear effect ( $b = -.0034$ ,  $b^2 = .00014$ ). That is, support for euthanasia decreased as age increased,

**Table 3:** Regression coefficients, Standard Errors (SE) and t-values for demographic and psychological predictors of support for the legalisation of euthanasia in New Zealand.

	<b>b</b>	<b>SE</b>	<b>Lower 95% CI</b>	<b>Upper 95% CI</b>	<b>Beta</b>	<b>t</b>
Constant	7.177	.240	6.706	7.649		
Gender (0 women, 1 men)	-.026	.031	-.086	.035	-.007	-.829
Age	-.003	.001	-.006	-.001	-.025	-2.737**
Age squared	.00014	.000	.000	.000	-.020	-2.292*
Māori (0 no, 1 yes)	-.038	.045	-.127	.051	-.007	-.831
Pacific (0 no, 1 yes)	-.575	.099	-.769	-.380	-.055	-5.799**
Asian (0 no, 1 yes)	-.313	.077	-.463	-.163	-.034	-4.092**
Income (log)	.030	.015	.001	.058	.018	2.030*
NZ deprivation (0–10)	-.020	.006	-.031	-.010	-.030	-3.686**
Education (0 low to 10 high)	-.026	.006	-.039	-.014	-.040	-4.084**
Socio-economic status	-.006	.001	-.008	-.003	-.047	-4.931**
Employed (0 no, 1 yes)	.078	.040	.000	.157	.018	1.958*
Partnered (0 no, 1 yes)	.034	.036	-.037	.104	.008	.931
Parent (0 no, 1 yes)	-.106	.036	-.177	-.036	-.025	-2.961**
Religion (0 no, 1 yes)	-1.158	.032	-1.221	-1.095	-.306	-36.087**
Urban area (0 rural, 1 urban)	-.102	.031	-.163	-.042	-.026	-3.324**
Political orientation	-.235	.013	-.260	-.210	-.166	-18.319**
Extraversion	.035	.013	.010	.061	.022	2.702**
Agreeableness	-.043	.017	-.075	-.010	-.022	-2.566**
Conscientiousness	.096	.014	.068	.123	.052	6.768**
Neuroticism	.055	.013	.029	.081	.033	4.164**
Openness	.001	.014	-.027	.029	.000	.043
Honesty-humility	-.067	.013	-.092	-.043	-.044	-5.354**

Note: \*  $p < .05$ , \*\*  $p < .01$ . Model fit statistics:  $R^2 = .171$ , AIC = 59414.27, BIC = 59597.51

with a decelerating decrease among those of older age. In comparison to Europeans (the reference group), Pacific ( $b=-.575$ ) and Asian peoples ( $b=-.313$ ) were less supportive of euthanasia. Being of Māori ethnicity was not significantly associated with attitudes toward euthanasia. People with a higher (log) household income ( $b=.030$ ) tended to be more supportive, while those with higher deprivation ( $b=-.020$ ) showed decreased support for euthanasia.

Those with a higher level of education ( $b=-.026$ ) and socio-economic status ( $b=-.006$ ) were significantly less supportive of euthanasia. Compared to those who were unemployed, employed individuals exhibited increased support for euthanasia ( $b=.078$ ). Parents relative to non-parents ( $b=-.106$ ), and those residing in urban areas, relative to those in rural areas ( $b=-.102$ ) showed less support for euthanasia. Gender and whether or not one had a partner were not significantly associated with support for euthanasia. Among all demographic variables, religion exhibited the strongest association with people's attitudes towards euthanasia.

**Psychological factors.** With regard to political orientation (1 = liberal to 7 = conservative), those who were more conservative exhibited less support for euthanasia ( $b=-.235$ ). Extraversion ( $b=.035$ ), conscientiousness ( $b=.096$ ) and neuroticism ( $b=.055$ ) were all positively associated with support for euthanasia. Conversely, agreeableness ( $b=-.043$ ) and honesty-humility ( $b=-.067$ ) were negatively associated with support for euthanasia. Openness to experience was the only personality trait with no significant relationship with attitudes towards euthanasia. Of the psychological factors, political orientation showed the strongest association with support for euthanasia. However, overall, religion had the strongest association with people's attitudes toward euthanasia.

## Discussion

The present study investigated attitudes about the legalisation of euthanasia using a large national probability sample of more than 15,000 New Zealand adults. We

assessed the distribution of New Zealanders' attitudes towards euthanasia, along with its association with a broad range of demographic and psychological factors. The 'snapshot' of attitudes in 2014/15 provided by this study is an important addition to the body of polling data on support for euthanasia in New Zealand.

### Overview of key findings

Our results reveal that the majority of New Zealanders expressed support the legalisation of euthanasia (66%), which was assessed by asking "Suppose a person has a painful incurable disease. Do you think that doctors should be allowed by law to end the patient's life if the patient requests it?" Regarding those who did not support euthanasia, 21.7% indicated they were neutral/unsure and 12.3% indicated they were strongly opposed. Our findings provided tentative evidence for a slight increase in support for euthanasia since the 2012 Horizon Research study, in which 62.9% supported, 24.8% were neutral/unsure and 12.3% opposed euthanasia.<sup>6</sup> Malpas et al suggest that the rise in international media coverage about practices and legislation of euthanasia may have contributed to a more positive climate regarding euthanasia.<sup>8</sup> However, we need to be cautious when making comparisons to previous studies, as many used different methods and attitude measures to our study.

In line with previous studies,<sup>3,9,10</sup> those who were religious, have low household income and high deprivation were found to be less supportive of euthanasia. The effect of religion appears to be associated with their strong belief in the sanctity of life and damnation of suicide.<sup>23</sup> Similar to findings from Horizon Research,<sup>5</sup> Pacific and Asian peoples tended to be less supportive of euthanasia. Unexpectedly, those with higher education and higher social status were significantly less supportive of euthanasia. Furthermore, age had a negative relationship with support for euthanasia, with older people generally being less supportive and this effect tending to plateau among the elderly. This finding is likely to represent a cohort effect, as younger generations tend to exhibit more permissive and liberal attitudes than older generations.<sup>24,25</sup>

Our study also found that more liberal individuals, as opposed to conservative individuals, showed increased support for euthanasia. Previously, Horizon Research found that support for euthanasia was highest among National (70%) and Labour party (67.7%) voters, but lowest among Conservative party voters (over 45% opposed).<sup>5</sup> Although additional research is needed, such strong opposition among Conservative party supporters may be an important contributor to the effect of political orientation. In regard to personality, those high on extraversion, conscientiousness and neuroticism were more supportive of euthanasia, while those high on agreeableness and honesty-humility were more opposed. The effect of honesty-humility is not surprising, as this trait is characterised by morals linked to concern for the wellbeing of others,<sup>26</sup> and has already been associated with decreased support for euthanasia in previous international studies.<sup>11,12</sup> However, the effects of the other five personality traits are novel and appear to be unique to the context of New Zealand. Further research on these effects is needed to increase understanding of the underlying drives behind New Zealanders attitudes towards euthanasia.

### Caveats

One major limitation is the cross-sectional nature of our study. Our analyses thus do not imply causal effects. Furthermore, it is important to recognise that we measured support for euthanasia using the single item “Suppose a person has a painful incurable disease. Do you think that doctors should be allowed by law to end the patient’s life if the patient requests it?” This item has been used previously in the British Social Attitudes Survey<sup>16</sup> and assesses levels of support versus opposition to euthanasia as a general concept only. As such, our results do not provide information about potentially more nuanced differences in support for euthanasia in different contexts and for different types of illnesses. For example, previous studies using vignettes have found that people tend to exhibit differing levels of support depending on the subject, type of illness and voluntariness of euthanasia.<sup>3,4</sup>

Euthanasia is an emotionally laden issue and thus, it is important to recognise that

the way in which the question is asked could affect how people respond. Because of this, we opted to assess support for euthanasia as a general concept, rather than asking about people’s views of euthanasia in specific scenarios or with regard to specific types of illness. For example, a study by Parkinson et al on cancer patients found that more people indicated they agreed with/supported the concept of euthanasia when questions mentioned patients’ suffering, the incurable nature of the disease and the role of doctors in ‘assisting’ or acting upon the patient’s request (68%–75%), compared to when questions included the term ‘kill’ or emphasised the doctors role in ‘deliberately bringing about a patient’s death’ (14% and 31% respectively).<sup>27</sup> The item in our study included the terms ‘painful,’ ‘incurable disease’ and ‘request’, which may have influenced participants to express increased support for euthanasia.

It is also important to note that, due to the improvement in palliative care and pain-management in Western countries,<sup>28</sup> most patients today should die without physical pain. Hence, the avoidance of physical pain may no longer be the central motivation for desiring euthanasia.<sup>29</sup> Dees et al suggest that patients’ definition of ‘unbearable suffering’ and reasons for requesting euthanasia now revolve around psycho-emotional and existential factors such as feelings of meaninglessness, loss of self and being a burden on others.<sup>29</sup> The question used in our study included the term ‘painful’ but did not mention any psychological factors associated with desires for euthanasia. This raises the possibility that our findings do not represent peoples’ support for the concept of euthanasia per se, but instead, support for assisted death in the face of severe physical pain.

### Concluding comments

The present study used a nationally representative sample of New Zealand adults to assess the distribution, demographic and psychological correlates of people’s attitudes towards the practice of euthanasia. The majority of New Zealanders were supportive of euthanasia, which was framed in terms of doctors being allowed to end a patient’s life, under the

condition that the patient has a painful incurable disease and requests that their life be ended. Those who were of Pacific or Asian ethnicity, had lower income, higher deprivation, higher education or socio-economic status were less supportive of euthanasia framed in these terms. Conversely, those who were non-religious, younger, employed, non-parents and live in rural areas exhibited increased support. In regard to personality traits, those high

on extraversion, conscientiousness and neuroticism showed increased support for euthanasia, while those high on agreeableness and honesty-humility exhibited decreased support. Lastly, those who were more liberal were more supportive of euthanasia. Our findings build on previous New Zealand studies and provide a framework for future research in understanding the origins of people's attitudes towards euthanasia.

**Table 4:** Bivariate correlations between all demographic and psychological variables with attitudes towards euthanasia (ATE).

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
1. ATE																						
2. Gender	.01																					
3. Age	-.09	.12																				
4. Māori	-.01	-.03	-.05																			
5. Pacific	-.09	-.02	-.08	.03																		
6. Asian	-.06	-.01	-.12	-.06	.01																	
7. Income	.03	.06	-.05	-.05	-.02	-.01																
8. Deprivation	-.04	-.03	-.03	.19	.15	.01	-.20															
9. Education	-.02	-.06	-.18	-.12	-.02	.11	.18	-.16														
10. SES	-.04	-.06	-.04	-.10	-.04	.04	.18	-.18	.57													
11. Employed	.06	.05	-.27	-.02	-.00	-.00	.16	-.08	.17	.11												
12. Partnered	.01	.07	.06	-.06	-.05	-.02	.19	-.19	.05	.08	.08											
13. Parent	-.07	.01	.43	.02	-.03	-.08	.03	-.05	-.12	-.00	-.08	.29										
14. Religion	-.36	-.05	.13	.04	.10	.07	-.03	.06	-.01	-.00	-.07	-.01	.09									
15. Urban	-.01	-.00	-.10	-.07	.07	.11	.09	-.13	.12	.14	.04	-.06	-.12	-.02								
16. Political	-.22	.04	.13	-.02	.02	.03	-.03	-.01	-.21	-.14	-.06	.06	.13	.24	-.09							
17. Extraversion	.02	-.06	-.03	.04	.02	-.02	.06	-.04	.03	.05	.06	.06	.07	.02	.02	-.06						
18. Agreeable	-.03	-.29	.00	-.04	-.03	-.02	.01	-.05	.10	.11	-.02	.02	.03	.07	.03	-.09	.12					
19. Conscience	.01	-.08	.07	.01	.01	.01	.05	-.06	.00	.02	.01	.08	.09	.04	-.01	.12	.06	.14				
20. Neuroticism	.04	-.13	-.18	.00	.01	.02	-.04	.05	-.01	-.04	-.01	-.04	-.09	-.01	.03	-.02	-.14	-.04	-.17			
21. Openness	.05	.05	-.12	-.01	-.01	-.01	.04	-.04	.24	.15	.07	-.03	-.09	-.06	.08	-.27	.19	.29	-.01	-.04		
22. Honesty-H	-.05	-.12	.18	-.07	-.05	-.09	-.02	-.04	.07	.06	-.06	.04	.06	.02	-.04	-.07	-.07	.22	.09	-.17	.06	
Mean	5.61	.37	49.34	.13	.03	.04	1082 77	4.71	5.05	53.2	.77	.75	.75	.40	.67	3.59	3.93	5.35	5.07	3.43	4.90	5.28
SD	1.85	.48	14.04	.33	.18	.20	1199 18	2.76	2.85	15.8	.42	.44	.44	.49	.47	1.31	1.16	.94	1.02	1.10	1.09	1.21

**Competing interests:**

Nil.

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