DEATH STUDIES
2021, VOL. 45, NO. 3, 226–237
https://doi.org/10.1080/07481187.2019.1626945

Routledge
Taylor & Francis Group

What makes euthanasia justifiable? The role of symptoms' characteristics and interindividual differences

Štěpán Bahník[a], Marek A. Vranka, and Klára Trefná[b]

[a]The Prague College of Psychosocial Studies, Prague, Czech Republic; [b]Faculty of Arts, Charles University, Prague, Czech Republic

ABSTRACT
The consideration of laypeople's views of conditions under which euthanasia is justifiable is important for policy decisions. In an online survey of US respondents, we examined how patient's symptoms influence justifiability of euthanasia. Euthanasia was judged more justifiable for conditions associated with physical suffering and negative impact on other people. The weight given to physical suffering and negative impact on others in evaluation of justifiability of euthanasia also differed based on personal characteristics. The results suggest that public discourse about medical assistance in dying should take into account differences in its perceived justifiability for patients with different conditions.

Introduction

One of the debates regarding medical assistance in dying (MAiD)[1] is about the conditions under which it is justified. While people seek to end their life because of various medical conditions, not all cases are considered equally justifiable. There may be a widespread notion that MAiD is primarily intended for patients suffering from excruciating pain that cannot be managed otherwise (Emanuel, 2005). In accordance with the prevalent public opinion, laws as well as actual practice in countries where some form of MAiD is legalized often limit its availability to cases of terminal illness or conditions associated with unbearable physical suffering (Emanuel, Onwuteaka-Philipsen, Urwin, & Cohen, 2016). Correspondingly, a study conducted in an end-of-life clinic in the Netherlands showed that people were more likely to be granted their request for MAiD when they had cancer or neurologic condition than when they had a psychological or psychiatric condition (Snijdewind, Willems, Deliens, Onwuteaka-Philipsen, & Chambaere, 2015). Physicians also usually refuse requests for MAiD of patients who are just weary of life and do not have a severe disease (Rurup et al., 2005). In the study conducted before PAS was legalized in Washington, among the most frequent reasons of physicians for refusing requests for MAiD were that patient's symptoms were treatable, the patient was depressed, the patient was expected to live longer than 6 months, and that the degree of suffering did not justify MAiD (Back, Wallace, Starks, & Pearlman, 1996).

Even though people may imagine pain as the prototypical reason for MAiD, only a minority of patients requesting MAiD do so because of severe pain (Emanuel, 2002). More frequent concerns of patients requesting MAiD are future loss of control, feeling as a burden, being dependent on others, loss of dignity, depression, and other forms of physical suffering than pain (Back et al., 1996). The reasons for requesting MAiD, however, differ depending on the patient's condition. For cancer patients requesting MAiD, pain is much more likely to be the reason for requesting MAiD than for patients with amyotrophic lateral sclerosis (ALS) or heart failure, who are more likely to request MAiD because they are afraid of suffocation in the case of the ALS and due to dyspnea in patients with heart failure (Maessen et al., 2010). Nevertheless, even in cancer patients, other factors such as depression, hopelessness, isolation, communication problems, loss of resilience and control, physical distress, weakness, drowsiness, and spiritual well-being seem to distinguish better between those who desire hastened death and those who do not (Breitbart et al., 2000; van der Lee et al., 2005; Wilson et al., 2007).

Few studies examined how patient's conditions and symptoms influence moral evaluation of MAiD. Using hypothetical scenarios, Raijmakers et al. (2015) showed that people were more likely to agree with

CONTACT Štěpán Bahník bahniks@seznam.cz The Prague College of Psychosocial Studies, Hekrova 805, Prague, 149 00, Czech Republic.
© 2019 Taylor & Francis Group, LLC

PAS in the case of a patient who had incurable cancer and was in severe pain than in the case of an old person who was tired of living, but not ill. Williams, Dunford, Knowles, & Warner (2007) found in a survey of the public that people were more likely to answer that they would want PAS if they had more severe dementia in comparison to less severe dementia. In another study, Bolt, Snijdewind, Willems, van der Heide, & Onwuteaka-Philipsen (2015) found that Dutch physicians were more likely to find it conceivable that they would assist someone in dying in the case of a patient with cancer or other physical disease than in case of a psychiatric disease, dementia, or in the case of a patient who was tired of living.

The perceived justifiability of reasons for MAiD may differ between people and no study has systematically examined this issue. The existing studies have explored only the relationship of personality characteristics with general attitude toward MAiD. They have found, e.g. that people are more likely to have negative attitudes toward MAiD if they are conservative (Caddell & Newton, 1995; Feltz, 2015; Ho & Penney, 1992; Koleva, Graham, Iyer, Ditto, & Haidt, 2012; Wilson et al., 2013), religious (Caddell & Newton, 1995; Deak & Saroglou, 2015; Emanuel, Faigclough, Emanuel, 2000; Ho & Penney, 1992; Koleva et al., 2012; Verbakel & Jaspers, 2010; Vrakking et al., 2005; Wilson et al., 2013), less educated (Caddell & Newton, 1995; Emanuel et al., 2000; Verbakel & Jaspers, 2010; Wilson et al., 2013), and older (Koleva, et al., 2012). These associations with attitudes also show in actual behavior—religious and less educated people were found to be less likely to die by assisted suicide (Steck et al., 2014) and to be interested in PAD (Emanuel et al., 2000). The association of sex with attitudes towards euthanasia is less clear, with some studies finding an association of negative attitudes towards euthanasia with being male (Koleva et al., 2012) and some with being female (Vrakking et al., 2005).

The apparent mismatch between legal requirements for MAiD, views of laymen, and actual reasons for which patients request MAiD (Back et al., 1996; Breitbart et al., 2000; Emanuel, 2002; van der Lee et al., 2005; Wilson et al., 2007) may be a cause for concern given that views of the public may influence the legal requirements, which should be aligned with patients' needs. The predictors of attitudes of the lay public toward MAiD are therefore of interest for facilitating public discussion, informing policy decisions, and communicating the policies to the public. However, a study systematically exploring perceived justifiability of MAiD in medical conditions not associated with physical suffering is currently lacking. In order to help to fill this gap in knowledge, this study is focused on exploring perceptions of justifiability of euthanasia for a wide range of symptoms and reasons for euthanasia. We also study the association of personal characteristics with the general attitude toward euthanasia as well as how they influence perceived justifiability of euthanasia for specific symptoms—if different people find euthanasia justifiable in different situations, taking into account associations between personal characteristics and perceived justifiability of reasons for euthanasia (or MAiD in general) will aid public debates regarding these issues and may increase mutual understanding between different groups. We examine some previously studied characteristics such as political attitudes, religiosity, sex, education, and moral foundations, but we also study orientations to happiness (Peterson, Park, & Seligman, 2005) and the liberty moral foundation (Iyer, Koleva, Graham, Ditto, & Haidt, 2012), which has not been previously examined in this context.

Moral foundations theory (Graham et al., 2011; Haidt & Graham, 2007) posits that there are six moral foundations (care, fairness, loyalty, authority, sanctity, and liberty) and people differ in the importance that they assign to them. We examined the association between moral foundations and attitudes toward MAiD because the theory provides an influential framework of thinking about moral judgment and existing studies of moral foundations and attitudes toward MAiD led to equivocal results (Deak & Saroglou, 2015; Koleva et al., 2012). Some of the foundations could be also associated with perceiving euthanasia justifiable for certain symptoms, such as the care foundation for symptoms associated with physical suffering. Orientation to happiness, that is whether people believe that happiness can be achieved through the pursuit of pleasure or meaning, was used as a promising exploratory factor. Because different symptoms interfere with different types of pursuit of happiness (e.g. pain with the pursuit of pleasure and a loss of personal identity with the pursuit of meaning), it is reasonable to expect that people who differ in their orientations to happiness will consider euthanasia justifiable in different circumstances as well.

Methods

Participants and procedure

We put a human intelligence task (HIT) on Amazon Mechanical Turk (MTurk) for 500 US workers in

August of 2016. MTurk is a crowdsourcing platform where registered workers perform various tasks for a payment and it is widely used for recruitment of participants in social sciences. The quality of data from MTurk is generally comparable to data collected from other samples (Necka, Cacioppo, Norman, & Cacioppo, 2016) and the MTurk participant pool is diverse in various respects (Paolacci & Chandler, 2014). At the time of the study, euthanasia was not legal in any of the US states.

Five hundred and twenty-five workers participated and 502 finished the study. We included in the materials two "symptoms" used to check participants' careful reading and attention ("select option one" and "select option eight"). According to preregistered exclusion criteria,[2] we excluded data from 44 participants who failed to answer any of these attention checks correctly and additional five participants who completed the whole study in less than 2 min. Data analysis was performed with data of the remaining 453 participants.

The study was administered using an online survey framework. Participants first completed all psychological measures and questions asking about sociodemographic information. Afterward, they were asked about their perception of justifiability of euthanasia in a hypothetical case where a terminally ill patient suffers from a certain untreatable symptom. Participants were provided a list of symptoms and for each of them answered how justifiable euthanasia would be in the case that the patient had the symptom. Finally, participants answered whether they considered that people should have the right for euthanasia in a range of different situations.

Materials

Scenario and symptoms

Participants were given a hypothetical scenario: "Imagine that there is a terminally ill patient who will die approximately in a year. The patient expresses repeatedly a wish to die and asks doctors for euthanasia. Apart from ultimately leading to death, the illness is associated with an untreatable symptom." Next they were asked to "rate how morally justifiable would euthanasia be if the symptom was" and they were given a list of symptoms which they evaluated on an eight-point scale ranging from 1 (not at all justifiable) to 8 (completely justifiable). The list of symptoms was given in a randomized order and included 49 symptoms and two items which instructed participants to select a specific response and served to check participants' attention. The symptoms were mostly selected from the list of symptoms from ICD-10 (World Health Organization, 1992, Chapter XVIII). From the list, we selected symptoms that were not overlapping or too similar and that were likely to be familiar to laypeople. We did not include "minor" symptoms where we expected low perceived justifiability of euthanasia, and we added some symptoms for validation of our approach (different severity of pain) as well as some symptoms which were deemed potentially interesting based on a previous study by Strohminger and Nichols (2014). We used lay names of the symptoms where possible, and provided a short description of the symptom where not.

We asked a separate sample of participants to rate on a seven-point scale to what degree they believed that the symptoms were associated with eight different dimensions such as physical suffering and loss of dignity (see Table 1 for the complete list). These dimensions were selected based on previously identified considerations taken into account when deciding about MAiD (Emanuel et al., 2016) and based on previous studies using a similar methodological approach (Strohminger & Nichols, 2014). We put a HIT on MTurk for 600 US workers. Six hundred and seventy-five participants started the questionnaire and 607 finished it. We excluded 32 participants who failed at least one of two attention checks which were presented as part of the list of symptoms. Each participant rated all symptoms on one randomly chosen dimension. The full list of symptoms with their average ratings for each dimension can be found in Table 1.[3]

Other measures

Moral foundations. We used a shortened 12-item measure of moral foundations which used 10 items asking about how much people consider various aspects relevant when they decide whether something is right or wrong. We took the items from the 20-item short form of the Moral Foundations Questionnaire (Graham et al., 2011). We further added two items that measured relevance of the liberty foundation (Iyer et al., 2012). The answers were provided on a scale ranging from 1 (not at all relevant) to 6 (extremely relevant). The two items for each moral foundation were averaged resulting in six variables measuring relevance of the six moral foundations.

Reasons for euthanasia. We asked participants to what degree they agree that everybody should have

Table 1. A list of symptoms with average ratings of justifiability of euthanasia and average ratings of their associations to the eight studied dimensions.

Symptom	Justifiability of euthanasia	Physical suffering	Psychological suffering	Loss of dignity	Loss of personal identity	Negative change of personality	Decreased quality of life	Loss of self-reliance	Being a burden on others
Severe chronic pain	5.64	6.21	3.68	3.79	3.60	4.27	5.70	4.06	3.94
Complete paralysis	5.55	5.21	3.00	4.57	4.26	3.90	5.68	4.75	5.64
Severe intermittent pain	4.86	6.06	3.29	3.60	3.29	4.38	5.20	4.07	3.79
Quadriplegia	4.81	5.16	2.85	4.37	4.02	3.60	5.52	4.70	5.27
Difficulty breathing and swallowing	4.56	5.22	3.43	3.71	3.08	3.71	5.29	4.01	4.19
Pedophilia	4.23	2.26	4.18	4.27	3.55	4.00	4.17	2.67	5.04
Persistent nausea with daily vomiting	3.94	5.58	3.07	3.98	2.77	3.97	5.30	3.52	3.84
Chronic confusion	3.91	4.05	5.07	4.38	5.10	4.53	5.59	4.58	4.88
Homicidal thoughts	3.67	3.51	5.18	4.40	4.58	5.22	4.91	4.01	5.60
Moderate chronic pain	3.60	5.55	3.37	3.16	2.91	4.03	4.68	3.52	2.96
Paraplegia	3.60	4.92	2.71	4.17	3.90	3.53	5.38	4.18	4.48
Severely impaired intelligence	3.50	3.45	4.06	4.35	4.73	4.25	4.74	4.60	4.81
Severe depression	3.45	4.44	5.91	4.75	5.47	5.44	5.68	4.67	4.45
Cruelty	3.37	3.27	4.69	4.21	4.15	4.86	4.29	3.42	5.10
Loss of language understanding	3.37	3.47	4.35	4.16	5.14	3.89	5.16	4.27	4.97
Severe facial deformity	3.35	4.38	2.84	4.35	3.69	3.53	5.20	3.07	2.64
Auditory hallucinations	3.26	3.99	5.03	3.71	4.40	4.21	4.93	3.84	4.04
Visual hallucinations	3.25	3.79	4.85	3.87	4.57	4.12	4.91	3.93	4.10
Moderate intermittent pain	3.23	5.44	3.35	3.08	2.76	3.78	4.36	3.22	2.94
Suicidal thoughts	3.23	4.30	5.91	4.62	5.02	5.29	5.49	4.60	4.46
Skin lesioning	3.14	4.96	2.56	3.78	2.54	3.22	4.54	2.81	3.12
Fecal incontinence	3.11	4.69	3.18	4.76	2.99	3.63	5.01	3.54	4.12
Severe difficulty sleeping	3.10	4.94	5.15	3.65	3.67	4.89	4.99	3.91	3.48
Loss of autobiographical memories	3.09	3.30	4.51	4.30	5.57	3.86	4.86	3.76	4.16
Blindness	3.06	4.27	2.50	3.41	3.60	3.07	4.97	3.88	4.15
Inability to feel emotions	3.02	3.06	5.25	4.00	5.51	5.12	4.32	3.31	4.09
Hopelessness	2.98	3.81	5.78	4.81	5.10	5.30	5.22	4.42	3.88
Inability to remember new information	2.97	3.70	4.82	4.27	5.12	4.19	5.16	4.64	4.31
Chronic fatigue	2.94	5.08	4.35	3.89	3.85	4.51	4.97	4.03	3.60
Mild chronic pain	2.90	4.92	3.65	2.84	2.60	3.75	4.00	2.84	2.48
Paranoia	2.90	3.36	5.56	4.29	4.93	4.96	5.06	4.43	4.58
Muscle weakness	2.85	4.95	3.03	3.25	2.95	3.53	4.68	3.78	3.39
Zoophilia	2.80	2.38	3.85	3.87	3.13	3.58	3.39	2.58	3.61
Moderately impaired intelligence	2.80	3.35	4.29	3.97	4.05	3.90	4.03	3.91	3.64
Intense mood swings	2.79	3.97	5.74	4.49	4.93	5.29	4.94	4.21	4.96
Aggressiveness	2.78	3.45	5.04	3.95	3.97	5.14	4.29	3.72	5.04
Frequent nightmares	2.77	3.60	5.12	3.43	3.79	4.40	4.28	3.07	3.43
Mild intermittent pain	2.74	4.75	3.26	2.63	2.46	3.48	3.94	2.79	2.43
Urinary incontinence	2.68	4.77	2.96	4.48	2.66	3.40	4.54	3.57	3.78
Loss of empathy	2.67	2.92	5.18	3.95	4.87	4.90	3.99	3.58	4.57
Muteness	2.62	3.34	3.49	4.03	4.30	3.70	4.30	3.46	3.61
Apathy	2.61	3.19	5.28	3.83	4.78	4.96	4.14	3.84	3.66
Inability to focus and concentrate	2.61	4.03	5.31	3.97	4.52	4.70	4.72	4.30	3.67
Antisocial behavior	2.59	3.05	5.54	4.35	4.82	5.42	4.46	4.00	4.01
Deafness	2.56	3.78	2.74	3.25	3.47	2.95	4.43	3.51	3.54
Pathological lying	2.33	2.23	4.85	4.14	4.41	4.25	3.67	2.78	4.93
Impotence	2.20	3.78	4.00	4.62	3.55	4.04	3.94	2.76	2.76
Coprolalia	2.16	2.75	4.38	3.81	3.64	3.51	3.94	2.63	3.42
Homosexuality	1.78	1.52	2.38	1.97	2.31	2.11	1.91	1.58	1.72

The symptoms are ordered according to the perceived justifiability of euthanasia in the case of a patient with the given symptom. Note that items given to participants sometimes contained additional information about meaning of terms, which is not shown in the table. The ratings of justifiability of euthanasia were made on an eight-point scale and the ratings of the eight dimensions were made on a seven-point scale.

the right for euthanasia in 10 different situations. The situations corresponded to the eight dimensions on which the symptoms were rated (e.g. "… if they are physically suffering." corresponded to the physical suffering dimension). We additionally asked whether people should have the right for euthanasia "if they are tired of living" and "if they wish so". The answers were provided on a seven-point scale ranging from 1 (completely disagree) to 7 (completely agree).

Orientation to happiness. The orientation to happiness scale (Peterson et al., 2005) measures three types of orientation to happiness—meaning, pleasure, and engagement. We gave participants two items out of the 18 in the original scale which had highest factor loadings for meaning ("Life has a lasting meaning.") and pleasure ("The good life is the pleasurable life.") orientations to happiness. Participants were asked to what degree they agree with the statements and provided their answers on a seven-point scale ranging from 1 (completely disagree) to 7 (completely agree).

Sociodemographic variables. We asked participants about their gender and highest completed level of education. Furthermore, we asked them to rate how religious they are on a scale from 1 (not at all religious) to 7 (very religious). Finally, participants answered where they would place themselves on the scale ranging from 1 (extremely liberal) to 7 (extremely conservative), separately for economic and social issues.

Results

Attitudes towards euthanasia

To examine general perception of euthanasia, we used two measures—average ratings of justifiability of euthanasia across all the symptoms and average ratings of agreement with people having the right for euthanasia in 10 situations. The two measures correlated highly (see Table 2). From the personality measures, the view that life has a lasting meaning, conservatism, religiosity, and three binding foundations (loyalty, authority, and sanctity) were associated with negative attitudes towards euthanasia. The view that the good life is the pleasurable life was associated with positive attitudes towards euthanasia, but the correlation was significant only for one of the measure of attitudes. Education, sex, as well as care, fairness, and liberty moral foundations had no significant relationship with attitudes toward euthanasia.

Table 2. Correlations between personal characteristics and attitudes toward euthanasia.

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Justifiability of euthanasia	3.22	1.89														
2. Right for euthanasia	3.61	1.81	0.70**													
3. Orientation toward meaning	5.56	1.47	−0.21**	−0.24**												
4. Orientation toward pleasure	5.42	1.37	0.06	0.11*	0.11*											
5. Economic conservatism	3.78	1.80	−0.13**	−0.20**	0.19**	−0.08										
6. Social conservatism	3.19	1.73	−0.23**	−0.34**	0.23**	−0.08	0.69**									
7. Religiosity	3.09	2.21	−0.24**	−0.42**	0.32**	−0.13**	.22**	0.41**								
8. Care	4.69	1.02	−0.01	−0.06	0.14**	0.03	−0.12**	−0.08	0.12*							
9. Fairness	4.72	0.97	−0.02	−0.01	0.06	0.07	−0.15**	−0.14**	0.01	0.63**						
10. Loyalty	3.45	1.20	−0.12**	−0.17**	0.27**	0.05	0.20**	0.29**	0.29**	0.27**	0.20**					
11. Authority	3.35	1.20	−0.12*	−0.19**	0.29**	0.10*	0.28**	0.39**	0.39**	0.22**	0.16**	0.67**				
12. Sanctity	3.55	1.41	−0.12*	−0.20**	0.25**	0.00	0.17**	0.34**	0.38**	0.29**	0.23**	0.56**	0.62**			
13. Liberty	4.35	0.96	−0.00	0.01	0.20**	0.12*	0.08	−0.01	0.05	0.47**	0.48**	0.38**	0.27**	0.23**		
14. Sex (male)	0.49	0.50	−0.04	0.05	−0.16**	−0.00	0.03	−0.01	−0.17**	−0.19**	−0.13**	−0.11*	−0.16**	−0.15**	0.00	
15. Education	3.55	0.92	−0.03	0.02	−0.01	−0.08	−0.01	−0.08	0.04	−0.01	0.05	−0.04	0.08	0.01	−0.02	0.01

*$p < 0.05$,
**$p < 0.01$.

Table 3. Correlations of the average ratings of symptoms in terms of the eight studied dimensions and justifiability of euthanasia.

Variable	*M*	*SD*	1	2	3	4	5	6	7	8
1. Physical suffering	4.04	1.04								
2. Psychological suffering	4.17	1.06	−0.38**							
3. Loss of dignity	3.95	0.57	−0.05	0.43**						
4. Loss of personal identity	3.98	0.91	−0.36*	0.76**	0.62**					
5. Negative change of personality	4.17	0.74	−0.06	0.88**	0.53**	0.68**				
6. Decreased quality of life	4.67	0.70	0.65**	0.12	0.55**	0.36*	0.34*			
7. Loss of self-reliance	3.70	0.69	0.37**	0.36*	0.56**	0.61**	0.51**	0.83**		
8. Being a burden on others	3.99	0.85	−0.10	0.38**	0.66**	0.60**	0.48**	0.49**	0.62**	
9. Justifiability of euthanasia	3.22	0.80	0.60**	−0.22	0.22	−0.00	0.06	0.67**	0.47**	0.44**

*$p < 0.05$,
**$p < 0.01$.

Symptoms

Table 1 shows average ratings of justifiability of euthanasia for all symptoms and their average ratings in terms of the eight studied dimensions. The average ratings of justifiability of euthanasia were above the midpoint of the scale (4.5) only for severe pain (both chronic and intermittent), severe paralysis (complete paralysis and quadriplegia), and difficulty breathing and swallowing.

Out of the eight studied dimensions, justifiability of euthanasia had the strongest correlation with decreased quality of life and physical suffering, followed by loss of self-reliance and being a burden on others (see Table 3). However, the dimensions were themselves intercorrelated. We therefore conducted a linear regression with justifiability of euthanasia as the dependent variable and the eight dimensions as independent variables. Given that the predictors were correlated, we also conducted a backward and forward stepwise regressions in order to somewhat mitigate the issue of collinearity and we conducted an exploratory factor analysis with promax rotation and extracted three factors, which we then used as predictors in regression.[4] The results of all the regression models can be found in Table 4; we further describe only regressions following from the factor analysis.

The first factor identified by the factor analysis loaded highly on dimensions related to other people (being a burden on others, loss of dignity, loss of personal identity, loss of self-reliance, decreased quality of life), the second factor loaded highly on dimensions related to psychological changes (psychological suffering, negative change of personality), and the last factor was related mostly to physical suffering (physical suffering, decreased quality of life). The first and third factor correlated positively with each other ($r = 0.57$). A regression model using factor scores as predictors showed a negative, but not significant, effect of the factor related to psychological changes and positive effects of the remaining two factors. Next, we picked the three dimensions that loaded highest on the three factors and conducted a regression with these dimensions as predictors (being a burden on others, psychological suffering, physical suffering). We obtained similar results with this "simple" model as with the model using factor scores, but the fit of the model was better than the fit of the "factors model". Notably, the simple model also showed a similar fit to the data as the full model, suggesting that additional dimensions above the three do not add much to predicting perceived justifiability of euthanasia.

Reasons for euthanasia

Evaluations of whether people have the right for euthanasia in 10 situations correlated highly among all 10 situation ($0.44 < r < 0.82$). Participants were most likely to agree that people should have the right for euthanasia if they were physically suffering. Other three situations that were rated on average around the midpoint of the rating scale were decreased quality of life, psychological suffering, and if the person wished to have euthanasia (see Figure 1).

Symptoms and personality

To find out how the influence of physical suffering, psychological suffering, and being a burden on others dimensions on perceived justifiability of euthanasia differed based on personal characteristics, we conducted a mixed-effect regression for each personal characteristic. The rating of justifiability of euthanasia for each symptom served as the dependent variable. The three dimensions were included as predictors and we were interested in their interactions with the personal characteristic variable. We also included in the model a main effect of the studied variable, random intercepts for participants to take into account that some participants were generally more against euthanasia, random intercepts for symptoms to take into account that euthanasia was generally considered

Table 4. Results of regression models predicting average ratings of justifiability of euthanasia.

	Full	Backward	Forward	Factors	Simple
	Estimate (CI)	Estimate (CI)	Estimate (CI)	Estimate (CI)	Estimate (CI)
Intercept	3.223 (3.085–3.361)***	3.223 (3.088–3.358)***	3.223 (3.087–3.359)***	3.223 (3.065–3.382)***	3.223 (3.084–3.363)***
Physical suffering	0.203 (−0.286–0.692)		0.276 (−0.007–0.558)	0.527 (0.366–0.687)***	0.442 (0.295–0.588)***
Psychological suffering	−0.368 (−0.821–0.085)	−0.484 (−0.794–−0.173)**	−0.132 (−0.308–0.044)	−0.116 (−0.277–0.044)	−0.167 (−0.321–−0.012)*
Loss of dignity	−0.38 (−0.798–0.039)	−0.46 (−0.822–−0.098)*	−0.306 (−0.697–0.084)		
Loss of personal identity	0.081 (−0.356–0.519)				
Negative change of personality	0.316 (−0.307–0.939)	0.489 (0.027–0.951)*			
Decreased quality of life	0.663 (−0.037–1.363)	0.902 (0.493–1.312)***	0.6 (0.021–1.178)*		
Loss of self-reliance	−0.398 (−0.892–0.097)	−0.356 (−0.783–0.070)	−0.35 (−0.780–0.080)		
Being a burden on others	0.529 (0.233–0.825)***	0.457 (0.218–0.696)***	0.58 (0.317–0.843)***	0.298 (0.134–0.462)***	0.547 (0.368–0.726)***
Observations	49	49	49	49	49
R^2/adj. R^2	0.701/0.641	0.695/0.652	0.691/0.647	0.551/0.521	0.652/0.629

The full model includes all dimensions as predictors, the backward and forward models are results of corresponding stepwise regressions. The factors model is computed using factor scores, which have coefficients displayed in rows corresponding to dimensions that load most strongly on them. The simple model includes these three dimensions as predictors, without using the factor scores.
*$p < 0.05$,
**$p < 0.01$,
***$p < 0.001$.

more justifiable for some symptoms, random slopes for the three dimensions for participants to take into account that the effect of the three dimensions could differ between participants, and a random slope for the studied variable for symptoms to take into account that the effect of the studied variable could differ between symptoms.

The results (see Table 5) showed that the weight given to physical suffering in evaluation of justifiability of euthanasia was lower for participants who were more conservative, religious, who considered authority and sanctity more relevant in moral evaluation, and for men. On the other hand, participants who considered fairness more relevant gave physical suffering more weight. There was no significant effect for interactions with psychological suffering. The weight given to the dimension "being a burden on others" in evaluation of justifiability of euthanasia was lower for participants who were conservative, considered authority more relevant in moral evaluation, and agreed with the view that life has a lasting meaning. On the other hand, the weight given to the dimension "being a burden on others" was higher for more educated people and people who agreed with the view that the good life is the pleasurable life.

Discussion

The results showed that people are more likely to consider euthanasia justifiable when the patient requesting euthanasia has a symptom that is associated with decreased quality of life, physical suffering, loss of self-reliance, and being a burden on others. Given that symptoms tend to affect the patient in multiple ways and their consequences influence each other as well, associations of symptoms with certain outcomes are correlated. For example, physical suffering is likely to cause decreased quality of life, and therefore the associations of symptoms with these two dimensions are similar. When we took into account that the eight studied dimensions of outcomes associated with the symptoms are intercorrelated, we found that the dimensions can be summed up by three factors, which approximately correspond to psychological changes, physical suffering, and changes in relation to other people, such as loss of dignity, loss of personal identity, loss of self-reliance, and being a burden on others. The three dimensions with highest factor loadings—physical suffering, psychological suffering, and being a burden on others—seemed

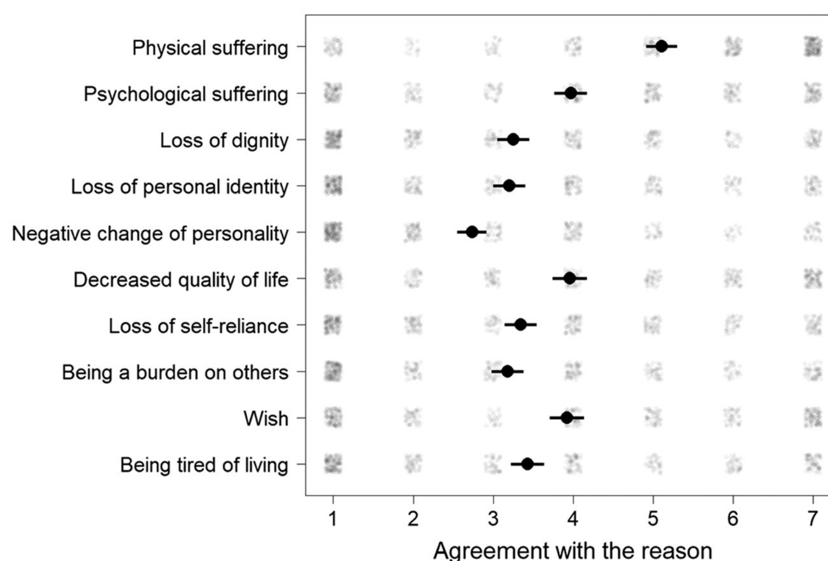

Figure 1. Approval of euthanasia for 10 reasons. The figure displays means of ratings of agreement with euthanasia for the 10 reasons and their 95% confidence intervals. The transparent points are individual data points with applied jitter.

Table 5. The effects of personal characteristics on the association between ratings of justifiability of euthanasia and symptom features.

	Main effect	Physical suffering	Psychological suffering	Being burden on others
Orientation toward meaning	−0.27***	−0.02	0.01	−0.03*
	[−0.38, −0.15]	[−0.05, 0.00]	[−0.01, 0.03]	[−0.06, −0.00]
Orientation toward pleasure	0.08	0.03	−0.01	0.04*
	[−0.05, 0.21]	[−0.00, 0.05]	[−0.03, 0.01]	[0.01, 0.07]
Economic conservatism	−0.14**	−0.06***	0.01	−0.04**
	[−0.23, −0.04]	[−0.08, −0.03]	[−0.01, 0.04]	[−0.07, −0.01]
Social sonservatism	−0.25***	−0.07***	0.01	−0.06***
	[−0.35, −0.15]	[−0.10, −0.04]	[−0.02, 0.03]	[−0.10, −0.03]
Religiosity	−0.21***	−0.05***	0.02	−0.06***
	[−0.29, −0.13]	[−0.08, −0.03]	[−0.00, 0.04]	[−0.09, −0.04]
Care	−0.02	0.04	0.02	0.02
	[−0.19, 0.15]	[−0.00, 0.07]	[-0.01, 0.05]	[−0.02, 0.07]
Fairness	−0.04	0.05*	−0.00	0.04
	[−0.22, 0.14]	[0.01, 0.09]	[-0.04, 0.04]	[−0.01, 0.10]
Loyalty	−0.19**	−0.03	−0.00	−0.02
	[−0.34, −0.05]	[−0.06, 0.00]	[−0.03, 0.02]	[−0.06, 0.02]
Authority	−0.18*	−0.05**	0.01	−0.05*
	[−0.33, −0.04]	[−0.08, −0.02]	[−0.02, 0.04]	[−0.09, −0.00]
Sanctity	−0.16*	−0.06***	0.01	−0.03
	[−0.28, −0.04]	[−0.09, −0.03]	[−0.02, 0.03]	[−0.07, 0.00]
Liberty	−0.00	0.01	−0.02	0.03
	[−0.19, 0.18]	[−0.03, 0.05]	[−0.06, 0.01]	[−0.03, 0.08]
Sex (male)	−0.15	−0.09*	−0.05	−0.03
	[−0.50, 0.20]	[−0.17, −0.00]	[−0.12, 0.02]	[−0.13, 0.07]
Education	−0.05	0.02	−0.02	0.06*
	[−0.25, 0.14]	[−0.03, 0.06]	[−0.05, 0.02]	[0.01, 0.11]

Each row of the table displays a result of a mixed-effect regression which used justifiability of euthanasia for symptoms as the dependent variable. The three dimensions identified as influential in previous analyses were used as predictors. The model also included a main effect of the predictor in the leftmost column and its interactions with the ratings of symptoms according to the three dimensions, which are shown in the three rightmost columns. The main effects for the ratings of the three dimensions are not displayed in the table. The displayed numbers represent regression coefficients and the numbers in brackets are their 95% confidence intervals.

* $p < 0.05$,
** $p < 0.01$,
*** $p < 0.001$.

to explain the variance in perceived justifiability of euthanasia for different symptoms well.

Even though psychological suffering associated with a symptom was negatively correlated with justifiability of euthanasia, this does not mean that more psychological suffering would in general lead to its lower perceived justifiability. It is possible that people would consider euthanasia more justifiable for a person, the more he or she suffers psychologically. Our finding only shows that euthanasia may be perceived

relatively less justifiable for symptoms associated primarily with psychological suffering in comparison to other symptoms in the list we used. It is possible that symptoms associated with higher psychological suffering are also related to another dimension that we did not measure and which could be confounding the observed relationship. For example, symptoms higher in psychological suffering may be often perceived as reducing decision-making abilities of patients. In such cases, it might be doubtful whether the expressed request for euthanasia is really voluntary, which would significantly influence perceived justifiability of euthanasia (Feltz, 2015). Our finding that psychological suffering was among the reasons for which participants were most likely to agree with the right for euthanasia further suggests that it is not psychological suffering by itself that is associated with reduced justifiability of euthanasia.

Apart from psychological suffering, people agreed similarly with the right for euthanasia for those who have decreased quality of life and those who wish euthanasia. However, all three reasons were rated on average around a midpoint of the scale, and only for physical suffering most respondents agreed that people should have the right for euthanasia. Results for the explicit attitudes toward the right for euthanasia thus corroborated the analysis of justifiability of euthanasia for symptoms, where we found that symptoms associated with physical suffering tend to be rated as a justifiable reason for euthanasia. Our results are therefore in accord with the study by Wilson et al. (2007) where most frequent arguments for legalization of PAD provided by cancer patients were pain and suffering and the right to choose.

The association of a symptom with the patient being a burden on others strongly predicted the perceived justifiability of euthanasia. However, when asked directly, participants generally did not consider that everyone should have the right for euthanasia if they are burden on others. There are several possible explanations for these seemingly conflicting results. It is possible that people are not willing to say directly that the impact on others is a good reason for euthanasia and their attitudes are revealed only when they are asked in an indirect way. It is also possible that people do not consider the impact on others as a sufficient reason for euthanasia. In the case of the rating of symptoms, it was stated that the patient is terminally ill, which was not the case in the question about the right for euthanasia. It is therefore possible that the impact on others influences attitudes toward euthanasia when the patient is terminally ill, but not otherwise. Another possible explanation is that the 'being a burden on others' dimension could have been interpreted differently in the two questions. People asked about the right for euthanasia for people who are burden on others might have imagined a case of a patient with physical limitations curtailing his or her self-reliance while people asked to rate the association of symptoms with a patient being a burden on others considered not only the impact on close people, but also on other people. Symptoms rated highly on the 'being a burden on others' dimension fell both in the former category (e.g. complete paralysis, quadriplegia), but also in the latter category (e.g. cruelty, homicidal thoughts). The symptoms associated with the impact on people who are not close to the patient are probably not prototypical medical symptoms and they might not have been imagined by respondents answering the direct question about the right for euthanasia.

It is noteworthy that there was a large variation in the perceived justifiability of euthanasia among the symptoms. While most people saw euthanasia justified in case of some symptoms, other symptoms were not considered as a justifiable reason for euthanasia almost by anyone even though the patient had a terminal illness and would therefore qualify for MAiD in certain countries (see Emanuel et al., 2016). This shows that the reason for euthanasia, and specifically the symptoms that the patient has, plays an important role in people's evaluation of euthanasia. This can be seen in discussions regarding whether depression should be an excluding factor for MAiD and whether psychological or mental suffering is a sufficient reason for MAiD (Berghmans, Widdershoven, & Widdershoven-Heerding, 2013; Raus & Sterckx, 2015).

Similarly as previous research, we found that religious and conservative people had more negative attitudes toward euthanasia. Unlike previous studies, we did not find any significant effect on sex and level of education. Religiosity has been consistently found as one of the strongest predictors of attitudes toward euthanasia and our study yielded results in accord with previous studies. A recent study suggested that religiosity is associated with negative attitudes toward euthanasia because of moral rigorism rather than compassionate concern for others (Deak & Saroglou, 2015). Our results support this conclusion by showing that more religious people tend to give lower weight to physical suffering in their evaluation of justifiability of euthanasia than less religious people.

We found that all three binding moral foundations (loyalty, authority, sanctity) were associated with

negative attitudes toward euthanasia and that the other three foundations had no significant relationship. Similar results were found in a previous study by Deak and Saroglou (2015). On the other hand, Koleva et al. (2012) did not find the association with authority and loyalty foundations, but found that people higher on the harm foundation and lower on the fairness foundation tend to have negative attitudes toward euthanasia. The difference between our results and the results of Koleva et al. (2012) may be caused by differences in analysis. While we interpret simple correlation coefficients, Koleva et al. reported only results from a multiple regression. It is possible that the lack of association of loyalty and authority foundations reported in the study by Koleva et al. may have been caused by correlations between the predictors in the multiple regression which included not only five moral foundations, but also demographic variables.

The agreement with the statement that life has a lasting meaning was associated with negative attitudes toward euthanasia. In fact, the perception of meaning in life was one of the strongest predictors of attitudes toward euthanasia alongside with religiosity and conservatism. It is possible that people who think that life has a lasting meaning are less likely to see other's life as meaningless even if they have a terminal illness, which influences their generally negative attitude toward euthanasia.

We also found that some of the personal characteristics are associated not only with the general evaluation of euthanasia but also with differences in perceived justifiability of euthanasia between symptoms. Conservatism, religiosity, being male, and authority and sanctity foundations were associated with lower weight given to physical suffering, while the fairness foundation was associated with higher weight given to physical suffering. People who were more conservative, religious, less educated, higher on authority foundation, and more oriented toward meaning in life tended to perceive euthanasia as relatively less justified in case of symptoms that were associated with the patient being a burden on others, while orientation toward pleasurable life had the opposite association.

The study was conducted using a US internet sample which is not representative of the whole population (Paolacci & Chandler, 2014). It is therefore possible that some of the findings would not generalize to the whole population. MTurk workers tend to be younger and more educated than the general US population (Paolacci, Chandler, & Ipeirotis, 2010; Shapiro, Chandler, & Muller, 2013). However, we also studied moderating effects of personality characteristics which may provide clues in which direction might the attitudes of the general US population differ from the attitudes of the studied sample. Furthermore, several studies have found that studies performed on MTurk and under other conditions generally yield similar results (Klein et al., 2014; Zwaan et al., 2017). Yet, the representativeness of the sample should be taken into consideration when interpreting the results of this study.

In addition, we showed that people find euthanasia more justifiable for patients who have a symptom associated with physical suffering or which has negative impact on other people. Perceived justifiability of euthanasia varied widely among symptoms, with severe pain and paralysis being symptoms where euthanasia was perceived as most justifiable. People also tended to believe that patients who physically suffer should have the right for euthanasia and fewer people believed that patients should have the right for euthanasia for other reasons. The results thus show that laws requiring people requesting MAiD to be suffering are largely aligned with the views of the public. The efforts to legalize MAiD in other countries might have more success if they take these attitudes in account and limit MAiD to cases of strong physical suffering. However, such a policy would not cover a large proportion of patients requesting MAiD, and unlike other symptoms, physical suffering might also be more easily manageable with palliative care (Li et al., 2017). Moreover, our results suggest that there are also other conditions, such as negative impact on others, that might make MAiD justifiable in the eyes of people and that are currently reflected neither in public discourse nor in laws regarding MAiD. One possible reason suggested by our study is that although people perceive euthanasia as more justifiable for conditions with negative impact of others, they seem to have reservations to express such notion when asked directly. Finally, according to our results, personal characteristics influence under what conditions people consider euthanasia justifiable and these personal differences should be thus taken into account in public discourse regarding MAiD.

Notes

1. We use the term physician-assisted death (PAD) as encompassing both euthanasia and physician-assisted suicide (PAS), where the former refers to the termination of life of a patient by a physician and the latter refers to a patient's suicide which is helped by a

physician by providing the patient with means to end his or her life (Emanuel et al., 2016). Following Li et al. (2017), we use the term medical assistance in dying where appropriate to account for the fact that assistance in dying might be provided by other medical professions than physicians.

2. Preregistration of the study as well as data, materials, and analysis code can be found on https://osf.io/jyp87/.
3. Note that not all the "symptoms" are normally associated with disease. In such cases we were interested how a given condition would be perceived if it was actually a symptom.
4. The results of the factor analysis as well as results of regression analyses using factor analysis with two and four extracted factors can be found on https://osf.io/c3e95/files/. The regression analysis with two factors showed a positive association of physical suffering with ratings of justifiability of euthanasia and the regression with four factors additionally showed a positive association with being a burden on others. Fits of these models were worse than the fit of the reported "simple" model.

Funding

This work was supported by Internal Grant [2017], as part of the Specific university research program at the Charles University, Faculty of Arts.

References

Back, A. L., Wallace, J. I., Starks, H. E., & Pearlman, R. A. (1996). Physician-assisted suicide and euthanasia in Washington State: Patient requests and physician responses. *The Journal of the American Medical Association*, *275*(12), 919–925. doi:10.1001/jama.1996.03530360029034

Berghmans, R., Widdershoven, G., & Widdershoven-Heerding, I. (2013). Physician-assisted suicide in psychiatry and loss of hope. *International Journal of Law and Psychiatry*, *36*(5–6), 436–443. doi:10.1016/j.ijlp.2013.06.020

Bolt, E. E., Snijdewind, M. C., Willems, D. L., van der Heide, A., & Onwuteaka-Philipsen, B. D. (2015). Can physicians conceive of performing euthanasia in case of psychiatric disease, dementia or being tired of living? *Journal of Medical Ethics*, *41*(8), 592–598. doi:10.1136/medethics-2014-102150

Breitbart, W., Rosenfeld, B., Pessin, H., Kaim, M., Funesti-Esch, J., Galietta, M., … Brescia, R. (2000). Depression, hopelessness, and desire for hastened death in terminally ill patients with cancer. *The Journal of the American Medical Association*, *284*(22), 2907–2911. doi:10.1001/jama.284.22.2907

Caddell, D. P., & Newton, R. R. (1995). Euthanasia: American attitudes toward the physician's role. *Social Science and Medicine*, *40*(12), 1671–1681. doi:10.1016/0277-9536(94)00287-4

Deak, C., & Saroglou, V. (2015). Opposing abortion, gay adoption, euthanasia, and suicide. *Archive for the Psychology of Religion*, *37*(3), 267–294. doi:10.1163/15736121-12341309

Emanuel, E. J. (2002). Euthanasia and physician-assisted suicide: A review of the empirical data from the United States. *Archives of Internal Medicine*, *162*(2), 142–152. doi:10.1001/archinte.162.2.142

Emanuel, E. J. (2005). Depression, euthanasia, and improving end-of-life care. *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology*, *23*(27), 6456–6458. doi:10.1200/JCO.2005.06.001

Emanuel, E. J., Fairclough, D. L., & Emanuel, L. L. (2000). Attitudes and desires related to euthanasia and physician-assisted suicide among terminally ill patients and their caregivers. *The Journal of the American Medical Association*, *284*(19), 2460–2468. doi:10.1001/jama.284.19.2460

Emanuel, E. J., Onwuteaka-Philipsen, B. D., Urwin, J. W., & Cohen, J. (2016). Attitudes and practices of euthanasia and physician-assisted suicide in the United States, Canada, and Europe. *The Journal of the American Medical Association*, *316*(1), 79–90. doi:10.1001/jama.2016.8499

Feltz, A. (2015). Everyday attitudes about euthanasia and the slippery slope argument. In M. Cholbi & J. Varelius (Eds.), *New directions in the ethics of assisted suicide and euthanasia* (pp. 217–237). Switzerland: Springer International Publishing.

Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology*, *101*(2), 366–385. doi:10.1037/a0021847

Haidt, J., & Graham, J. (2007). When morality opposes justice: Conservatives have moral intuitions that liberals may not recognize. *Social Justice Research*, *20*(1), 98–116. doi:10.1007/s11211-007-0034-z

Ho, R., & Penney, R. K. (1992). Euthanasia and abortion: Personality correlates for the decision to terminate life. *The Journal of Social Psychology*, *132*(1), 77–86. doi:10.1080/00224545.1992.9924690

Iyer, R., Koleva, S., Graham, J., Ditto, P., & Haidt, J. (2012). Understanding libertarian morality: The psychological dispositions of self-identified libertarians. *Public Library of Science One*, *7*(8), e42366. doi:10.1371/journal.pone.0042366

Klein, R. A., Ratliff, K. A., Vianello, M., Adams, R. B., Bahník, Š., Bernstein, M. J., … Nosek, B. A. (2014). Investigating variation in replicability: A "Many Labs" replication project. *Social Psychology*, *45*(3), 142–152. doi:10.1027/1864-9335/a000178

Koleva, S. P., Graham, J., Iyer, R., Ditto, P. H., & Haidt, J. (2012). Tracing the threads: How five moral concerns (especially Purity) help explain culture war attitudes. *Journal of Research in Personality*, *46*(2), 184–194. doi:10.1016/j.jrp.2012.01.006

Li, M., Watt, S., Escaf, M., Gardam, M., Heesters, A., O'Leary, G., & Rodin, G. (2017). Medical assistance in dying–implementing a hospital-based program in Canada. *New England Journal of Medicine*, *376*(21), 2082–2088. doi:10.1056/NEJMms1700606

Maessen, M., Veldink, J. H., Berg, L. H., Schouten, H. J., Wal, G., & Onwuteaka-Philipsen, B. D. (2010). Requests for euthanasia: Origin of suffering in ALS, heart failure, and cancer patients. *Journal of Neurology*, *257*(7), 1192–1198. doi:10.1007/s00415-010-5474-y

Necka, E. A., Cacioppo, S., Norman, G. J., & Cacioppo, J. T. (2016). Measuring the prevalence of problematic respondent behaviors among MTurk, campus, and community participants. *Public Library of Science One*, *11*(6), e0157732. doi:10.1371/journal.pone.0157732

Paolacci, G., & Chandler, J. (2014). Inside the turk: Understanding mechanical turk as. *Current Directions in Psychological Science*, *23*(3), 184–188. doi:10.1177/0963721414531598

Paolacci, G., Chandler, J., & Ipeirotis, P. G. (2010). Running experiments on Amazon Mechanical Turk. *Judgment and Decision Making*, *5*(5), 411–419.

Peterson, C., Park, N., & Seligman, M. E. (2005). Orientations to happiness and life satisfaction: The full life versus the empty life. *Journal of Happiness Studies*, *6* (1), 25–41. doi:10.1007/s10902-004-1278-z

Raijmakers, N. J., van der Heide, A., Kouwenhoven, P. S., van Thiel, G. J., van Delden, J. J., & Rietjens, J. A. (2015). Assistance in dying for older people without a serious medical condition who have a wish to die: A national cross-sectional survey. *Journal of Medical Ethics*, *41*(2), 145–150. doi:10.1136/medethics-2012-101304

Raus, K., & Sterckx, S. (2015). Euthanasia for mental suffering. In M. Cholbi & J. Varelius (Eds.), *New Directions in the Ethics of Assisted Suicide and Euthanasia* (pp. 79–96). Switzerland: Springer International Publishing.

Rurup, M. L., Muller, M. T., Onwuteaka-Philipsen, B. D., van der Heide, A., van der Wal, G., & van der Maas, P. J. (2005). Requests for euthanasia or physician-assisted suicide from older persons who do not have a severe disease: An interview study. *Psychological Medicine*, *35*(5), 665–671. doi:10.1017/S003329170400399X

Shapiro, D. N., Chandler, J., & Mueller, P. A. (2013). Using mechanical Turk to study clinical populations. *Clinical Psychological Science*, *1*(2), 213–220. doi:10.1177/2167702612469015

Snijdewind, M. C., Willems, D. L., Deliens, L., Onwuteaka-Philipsen, B. D., & Chambaere, K. (2015). A study of the first year of the end-of-life clinic for physician-assisted dying in the Netherlands. *JAMA Internal Medicine*, *175* (10), 1633–1640. doi:10.1001/jamainternmed.2015.3978

Steck, N., Junker, C., Maessen, M., Reisch, T., Zwahlen, M., & Egger, M, & Swiss National Cohort. (2014). Suicide assisted by right-to-die associations: A population based cohort study. *International Journal of Epidemiology*, *43* (2), 614–622. doi:10.1093/ije/dyu010

Strohminger, N., & Nichols, S. (2014). The essential moral self. *Cognition*, *131*(1), 159–171. doi:10.1016/j.cognition.2013.12.005

van der Lee, M. L., van der Bom, J. G., Swarte, N. B., Heintz, A. P. M., de Graeff, A., & van den Bout, J. (2005). Euthanasia and depression: A prospective cohort study among terminally ill cancer patients. *Journal of Clinical Oncology*, *23*(27), 6607–6612. doi:10.1200/JCO.2005.14.308

Verbakel, E., & Jaspers, E. (2010). A comparative study on permissiveness toward euthanasia: Religiosity, slippery slope, autonomy, and death with dignity. *Public Opinion Quarterly*, *74*(1), 109–139. doi:10.1093/poq/nfp074

Vrakking, A. M., van der Heide, A., Looman, C. W., van Delden, J. J., Onwuteaka-Philipsen, B. D., van der Maas, P. J., & van der Wal, G. (2005). Physicians' willingness to grant requests for assistance in dying for children: A study of hypothetical cases. *The Journal of Pediatrics*, *146*(5), 611–617. doi:10.1016/j.jpeds.2004.12.044

Williams, N., Dunford, C., Knowles, A., & Warner, J. (2007). Public attitudes to life-sustaining treatments and euthanasia in dementia. *International Journal of Geriatric Psychiatry*, *22*(12), 1229–1234. doi:10.1002/gps.1819

Wilson, D. M., Birch, S., MacLeod, R., Dhanji, N., Osei-Waree, J., & Cohen, J. (2013). The public's viewpoint on the right to hastened death in Alberta, Canada: Findings from a population survey study. *Health & Social Care in the Community*, *21*(2), 200–208. doi:10.1111/hsc.12007

Wilson, K. G., Chochinov, H. M., McPherson, C. J., Skirko, M. G., Allard, P., Chary, S., … Clinch, J. J. (2007). Desire for euthanasia or physician-assisted suicide in palliative cancer care. *Health Psychology*, *26*(3), 314–323. doi:10.1037/0278-6133.26.3.314

World Health Organization. (1992). *The ICD-10 classification of mental and behavioural disorders: Clinical descriptions and diagnostic guidelines*. Geneva: World Health Organization.

Zwaan, R. A., Pecher, D., Paolacci, G., Bouwmeester, S., Verkoeijen, P., Dijkstra, K., & Zeelenberg, R. (2017). Participant nonnaiveté and the reproducibility of cognitive psychology. *Psychonomic Bulletin and Review*. *25*(5): 1968–1972. doi:10.3758/s13423-017-1348-y.