

Attitudes Toward Euthanasia for Patients Who Suffer From Physical or Mental Illness

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Abstract

This study examined whether attitudes toward euthanasia vary with type of illness and with the source of the desire to end the patient's life. The study used a 3 (illness type: cancer, schizophrenia, depression) × 2 (euthanasia type: patient-initiated, family-initiated) between-groups experimental design. An online questionnaire was administered to 324 employees and students from a public Australian university following random assignment of participants to one of the six vignette-based conditions. Attitudes toward euthanasia were more positive for patients with a physical illness than a mental illness. For a patient with cancer or depression, but not schizophrenia, approval was greater for patient-, than, family-, initiated euthanasia. Relationships between illness type and attitudes were mediated by perceptions of patient autonomy and illness controllability. Findings have implications for debate, practices, and legislation regarding euthanasia.

Keywords

euthanasia, end-of-life decisions, attitudes toward euthanasia, euthanasia types, mental illness

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Research conducted over several decades has shown that the majority of people in many nations support the legalization of euthanasia (Cohen, Van Landeghem, Carpentier, & Deliens, 2014; Helme, 1993; Kamble, Sorum, & Mullet, 2012; Ming-lin Chong & Fok, 2004; Sanson et al., 1998; Terkamo-Moisio et al., 2017; J. A. Wasserman, Aghababaei, & Nannini, 2016). What is less clear from this research is the extent to which these attitudes vary with aspects of the patient, the illness, and the context in which decisions regarding euthanasia are made. As J. Wasserman, Clair, and Ritchey (2005) have argued, research is needed to capture more of the variation in the circumstances upon which public approval or disapproval of euthanasia might depend. Knowledge of these circumstances, or moderating variables, can inform public debate, a debate which Appel (2007) and others have argued is necessary prior to any legislative change around euthanasia. One potentially important set of factors upon which approval of euthanasia might hinge relates to the patient's illness, including its etiology, symptomatology, and prognosis. In particular, approval of euthanasia might differ greatly in relation to patients suffering from mental, rather than physical, illnesses.

To explore these issues and inform relevant discussion, the current study examined attitudes toward euthanasia of patients suffering a physical illness (cancer) or one of two mental illnesses (schizophrenia and depression). In addition, we examined whether attitudes toward euthanasia across these illness types depend on whether the wish to end the patients' life is expressed by the patients themselves or by their family. Finally, we explored the role of several variables (perceived patient autonomy, illness controllability, illness stereotypes, and patient social acceptance) that potentially mediate the effect of illness type on attitudes toward euthanasia.

Illness Type and Attitudes Toward Euthanasia

Most of the empirical evidence demonstrating support for euthanasia, at least implicitly, represents the patient as suffering a physical illness, and typically a terminal one. Limited literature exists around approval of euthanasia for the mentally ill. This is surprising given that the issue is currently a source of considerable debate and potential societal change. In the state of Victoria in Australia, for example, legislators are considering legalizing euthanasia from 2019, although this applies only for adult patients who suffer from an advanced and incurable illness, who are of sound decision-making capacity, and who initiate the request themselves. In this jurisdiction, mental illness will not provide adequate grounds for euthanasia (Willingham, 2017). In contrast, Belgian law allows euthanasia for patients with either schizophrenia or depression (Thienpont et al., 2015) and, in some jurisdictions (e.g., Switzerland, Belgium, Luxemburg, and the Netherlands), legislators approve euthanasia for patients who suffer from a mental illness without any terminal condition

(Kim, De Vries, & Peteet, 2016). Moreover, De Hert et al. (2015) found that more than half the nurses in Belgium have received a request for euthanasia from a psychiatric patient, and Kim et al. (2016) estimated that, in the Netherlands, euthanasia for psychiatric patients is currently occurring about 10 times more frequently than two decades ago.

Given these developments, the issue currently under investigation is whether the provision to the mentally ill of a right to euthanasia is supported by community opinion. This issue has recently been vigorously debated in the literature. Schuklenk and Van de Vathorst (2015) argue that limiting access to euthanasia for people with a mental illness is unjustly discriminatory. However, others posit that this concern for justice must be weighed against considerations of capability, with the mentally ill generally perceived to be less competent than the physically ill to make end-of-life decisions (Doernberg, Peteet, & Kim, 2016; Kim & Lemmens, 2016). Indeed, in some cases, the wish to die might be the direct result of mental illness (Helme, 1993). The issue is made more complex by the heterogeneity of mental illnesses, with perceptions of the divergent symptoms of serious illnesses like schizophrenia and depression likely to differentially affect attitudes toward euthanasia. In particular, the decisional capacity of mentally ill patients—whether their request to euthanize results from rational decision-making—has been questioned (Owen, Freyenhagen, Hotopf, & Martin, 2015; Wang et al., 2016). These doubts over decisional capacity, plus related factors discussed later, lead us to predict that fewer people will approve of euthanasia for the mentally ill than approve it for those suffering a physical illness.

Mediators of the Effects of Illness Type on Attitudes Toward Euthanasia

In this section, we elaborate on our grounds for expecting attitudes toward euthanasia to be more favorable for patients with a physical illness than for patients with a mental illness. We identify four dimensions along which the mentally ill may be negatively viewed (perceived patient autonomy, illness controllability, illness stereotypes, and patient social acceptance), and we present arguments to suggest that each of these may act as a mediator of the effect of illness type on approval of euthanasia.

Patient autonomy refers to the rights of individuals to make informed decisions about their future life including their medical care (Blackhall, Murphy, Frank, Michel, & Azen, 1995). A belief in the importance of self-determination and autonomy in regard to the patient has been shown to be a reliable predictor of permissiveness toward euthanasia (Fried, Stein, O'Sullivan, Brock, & Novack, 1993; Terkamo-Moisio et al., 2017; Verbakel & Jaspers, 2010). Several studies show that physically ill individuals are perceived to be more autonomous in their decision making than are the mentally

ill (e.g., Angermeyer, Matschinger, & Schomerus, 2013), and this perception could lead to the exclusion of mentally ill patients from approval for euthanasia (Rae, Johnson, & Malpas, 2015). Further, symptoms of both schizophrenia and depression could affect decisional capacity (Doernberg et al., 2016) and among the general public, this could result in reluctance/resistance/hesitancy to allow a patient autonomy in making end-of-life decisions, which, in turn, might lead to less permissiveness toward euthanasia in the context of mental illness.

Controllability refers to the extent to which individuals are perceived to have control over the progression of their illness and treatment outcomes. Perceptions of illness controllability, or the lack thereof, are critical to end-of-life decisions. For example, Emanuel, Von Gunten, and Ferris (1999) found that one of the two most prominent reasons for patient euthanasia requests is fear of losing control (the other is fear of becoming a burden on family), while, according to Hough (2010), individuals report feeling more fear about losing control and independence than about death itself. Experimental research by Corrigan et al. (2000) showed that people with schizophrenia or depression are perceived to be more in control of their illness and treatment, and less worthy of compassion, than are cancer illness groups. Other evidence shows that perceptions of controllability also vary within broad illness categories, with depression perceived as more controllable than schizophrenia (Birchwood, Mason, Macmillan, & Healy, 1993). Patients who have greater control over their illnesses (e.g., those suffering from depression rather than cancer) can be expected to manage their illness (e.g., pain, medications, prognosis) in a way that could improve many aspects of their life (e.g., hope, resilience, better chances for recovery). Conversely, uncontrollability limits the utility of efforts aimed at illness management. Taking these first two potential mediators together, patients with cancer may be perceived as more autonomous, as well as less able to manage the illness or prevent its progression, and hence, more “worthy” of a means of reducing their suffering via euthanasia, than are patients with schizophrenia or depression.

Illness stereotypes, the third proposed mediator, refer to knowledge structures regarding ill individuals. Especially when negatively toned, these stereotypes may be used to categorize, prejudge, and discriminate against members of different illness groups (Hilton & Von Hippel, 1996). Research shows that more negative stereotypes are assigned to mental illness than physical illness (Imhoff, 2016). Also, public opinion ascribes less favorable stereotypes to schizophrenia than to depression (Makowski, Mnich, Angermeyer, & Von Dem Knesebeck, 2016). These differences could help explain differences in approval of euthanasia for these illness groups: the stronger and more negative stereotypes assigned to an illness, the less approval for euthanasia.

The fourth proposed mediator, social acceptance, is the extent to which a person is perceived to be worthy of inclusion in social groups (Martin,

Pescosolido, & Tuch, 2000). Research shows that patients suffering from schizophrenia compared with depression are viewed as less socially acceptable, and conversely, to require greater social distance (Martin et al., 2000). Greater social distance is also given by the general public when the patient has depression compared with a patient with a physical illness (Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999). Thus, it is possible that the more socially acceptable the illness, the greater the perceived right to euthanasia.

Types of Euthanasia

Scholars distinguish between numerous different types of euthanasia (e.g., Sanson et al., 1998; J. Wasserman et al., 2005). Most commonly, a distinction is drawn between voluntary and involuntary euthanasia (the former implies that euthanasia is in accord with the patient's wishes, whereas the latter implies that euthanasia is against the patient's wishes). On the assumption that families usually behave with the suffering person's best interest in mind, a further distinction can be made under the heading of voluntary euthanasia between patient-initiated and family-initiated euthanasia. While attitudes toward these and other types of euthanasia have been found to differ widely (Sanson et al., 1998), the current study investigated whether type of euthanasia differentially moderates levels of approval of euthanasia for physically ill and mentally ill patients. In light of differences between patients with physical and mental illnesses in perceived decisional capacity and in the other mediating variables described earlier, we predicted that attitudes toward the euthanasia of physically and mentally ill individuals would vary with the type of euthanasia. For patients with a physical illness (e.g., cancer), approval of euthanasia is more likely when it is initiated by the patient. Conversely, illnesses like schizophrenia and depression could compromise patient decisional-capacity, and thus, these illnesses will elicit greater approval if the request is made by the family.

The Current Study

Limited past research has explored possible moderators and mediators of attitudes to euthanasia. This study examined the extent to which a sample of Australian adults approve of euthanasia, and whether these attitudes vary with the type of illness (i.e., cancer vs. schizophrenia vs. depression) and with the type of euthanasia (i.e., patient-initiated vs. family-initiated euthanasia). A further focus was on the role of the four potential mediators of the relationship between illness type and attitudes toward euthanasia. The two mental illnesses were selected because, while they both may involve considerable suffering, they differ in terms of the mediator variables currently under investigation.

To investigate the understudied topic of attitudes to euthanasia in the mentally ill, the current research used methods that vary from, and arguably improve

upon, common practices in this field. Much past research has compared attitudes expressed by the same individuals to different euthanasia scenarios. Such within-person comparisons may be biased by the operation of social desirability and demand effects such that participants feel obliged to give socially acceptable or “sensible” answers. In contrast, we provide a more valid test of causal effects through the use of a between-group experimental design in which participants were randomly assigned to one of six experimental conditions, each of which was represented by a written vignette. These vignettes provided case details while ensuring that aspects of the patient’s illness (e.g., the severity of pain) and other characteristics (e.g., age, gender, place of residence, familial status) were unchanged across conditions.

Certain religions and belief systems place the highest value on the preservation of life. Holding such beliefs is incompatible with approval of euthanasia (Sanson et al., 1998). Consistent with this, religiosity has been shown to be associated with disapproval of euthanasia (Aghababaei & Wasserman, 2013; Weiss, 1996). To assess whether the impact of our independent variables (IVs) was independent of participant religiosity, this variable was included as a covariate in relevant analyses. Furthermore, as expressed attitudes toward euthanasia may be influenced by considerations of social desirability, this variable was also taken into account.

The following hypotheses were tested:

Hypothesis 1 (H1): Approval of euthanasia will be greater when the illness is cancer than when it is schizophrenia or depression.

Hypothesis 2 (H2): Euthanasia type and illness type will interact such that approval will be greater for patient-initiated than family-initiated euthanasia when the illness is cancer and greater for family-initiated than patient-initiated euthanasia when the illness is depression/schizophrenia.

Hypothesis 3 (H3): The relationship between illness type and approval of euthanasia will be mediated by (a) perceived patient autonomy, (b) perceived controllability of the illness, (c) strength of negative illness stereotypes, and (d) social acceptance of the patient.

Method

Participants

Participants were 324 individuals, recruited as a convenience sample of employees (76.2%) and students from an Australian university. The sample comprised 227 women. Ages ranged from 17 to 73 years ($M_{\text{age}} = 28.3$ years, $SD = 12.10$). Most were born in Australia (73.5%), and most spoke English as their first language (83.6%).

Materials

Participants completed an online questionnaire. At the start, one of six vignettes was presented, each depicting a request for either patient-initiated euthanasia (patient wishes to be euthanized) or family-initiated euthanasia (patient's family wishes the patient to be euthanized). The vignettes, which were developed and refined through two pilot studies, depicted a 65-year-old person in a state of pain and suffering because of either a physical illness (cancer) or a mental illness (schizophrenia or depression). Vignettes differed in respect of the two independent variables (illness type, euthanasia type); see Appendix A for vignettes.

Attitudes toward euthanasia. The dependent variable was measured by a 14-item adapted scale, Assessing Right to Die Attitudes (Rogers, 1996). Original items were modified to align with the vignettes (e.g., "Euthanasia for Pat is a humane act"). Responses were judged on a 7-point scale (1 = *strongly disagree* and 7 = *strongly agree*), with higher scores representing greater approval.

Autonomy. To measure perceived patient autonomy, two items were adapted from Weiss (1996) to assess beliefs regarding patient self-determination, competence, and independence in making end-of-life decisions. For example, "Pat should have control in making end-of-life decisions." Responses were given on a 7-point scale (1 = *strongly disagree* and 7 = *strongly agree*), with higher scores signifying perceptions of greater patient autonomy. The two items were correlated, $r = .54, p < .001$.

Illness controllability. Two subscales from the Revised Illness Perception Questionnaire (IPQ-R; Moss-Morris et al., 2002) were used to assess illness controllability. Specifically, the 10 items that make up the personal control and treatment control subscales were utilized, with minor adaptations to wording made to ensure they fit the current vignettes (e.g., "What Pat does can determine whether Pat's illness gets better or worse."). A 7-point response scale was used (1 = *strongly disagree* to 7 = *strongly agree*), with higher scores demonstrating greater perceptions of illness controllability.

Illness stereotypes. Five items from a measure designed to assess illness stereotypes (Link, Struening, Neese-todd, Asmussen, & Phelan, 2002) were modified to fit the vignettes in the current study (e.g., "Pat is likely to be violent."). A 7-point response scale was used (1 = *strongly disagree* to 7 = *strongly agree*), with higher scores indicating a more negative stereotype pattern.

Social acceptance. The social acceptability of the patient depicted in vignettes was measured using five items taken from the Attitudinal Social Distance Scale (Link et al., 2002). Items assess the extent to which participants are willing to accept

and interact with such a person (e.g., “How likely would you move next door to Pat?”). These items employed a 4-point response scale (1 = *definitely not* to 4 = *definitely yes*), with higher scores indicating greater social acceptance.

Religiosity. Religiosity was measured by the three-item Intrinsic Religiosity scale (Tiliopoulos, Bikker, Coxon, & Hawkin, 2007). The scale assesses the extent to which a person is leading life according to religion. A 7-point response scale was used (1 = *strongly disagree* to 7 = *strongly agree*), with higher scores indicating greater religiosity.

Social desirability bias. Social desirability bias was measured by the 13-item Marlowe–Crowne Social Desirability Scale-Short Form (Reynolds, 1982). A dichotomous true–false response format was used.

Manipulation checks. Three manipulation checks were used, two for illness type (e.g., “What type of illness does Pat have?”) and one for euthanasia type (“Please indicate who is wishing to put Pat to death.”). Two attention checks were employed (e.g., “In order to verify that you pay attention, please select: *strongly disagree*.”). Notably, 26 participants failed to correctly answer one or more of the attention/manipulation checks. Analyses were conducted with and without the cases removed. As results did not vary substantively, these cases were removed from all analyses reported in this article.

Procedure

Following receipt of university ethics approval and pilot testing, an online questionnaire was advertised through a university-wide broadcast email targeting both students and staff. Participants were randomly allocated one of the six vignettes and then asked to complete the questionnaire items. All participants were eligible to enter a draw to win one of two shopping vouchers worth \$50. Completion time was approximately 20 minutes. Two-way (illness type, euthanasia type) between-groups analyses of covariance (ANCOVAs), with paired comparisons, were used to assess main and moderated effects. Three mediation models were examined using the PROCESS macro for SPSS, with each comparing the effects of a pair of illnesses on attitudes toward euthanasia as mediated by patient autonomy, illness controllability, illness stereotypes, and social acceptance.

Results

Effects of Illness Type on Attitudes Toward Euthanasia

Overall, 86.1% of participants indicated positive attitudes toward euthanasia, while 12.7% of participants disapproved. Only four participants (1.23%)

Table 1. Descriptive Statistics and Correlations for Attitudes Toward Euthanasia, Religiosity, Autonomy, Illness Controllability, Illness Stereotypes, Social Acceptance, Social Desirability, and Age.

	M	SD	α	2	3	4	5	6	7	8
1. Attitudes toward euthanasia	5.21	1.16	.93	-.39***	.46***	-.50***	-.21***	.14*	-.10	.09
2. Religiosity	2.79	1.66	.80		-.12*	.16**	.09	.03	.03	.04
3. Autonomy	5.30	1.24	.69			-.37***	-.40***	.26***	.04	.06
4. Illness controllability	4.08	1.21	.93				.28***	-.11	-.07	-.08
5. Illness stereotypes	4.08	0.93	.72					-.41***	-.02	-.11*
6. Social acceptance	3.11	0.57	.87						.14*	.20***
7. Social desirability	5.20	1.10	.70							.18**
8. Age	28.33	12.0	-							

* $p < .05$. ** $p < .01$. *** $p < .001$.

expressed neutral attitudes. Table 1 presents descriptive statistics for all variables, as well as bivariate correlations. As shown, religiosity ($r = -.39$), but not social desirability ($r = -.10$), was significantly correlated with attitudes toward euthanasia, so only the former was included as a covariate in subsequent analyses.

Table 2 displays the means, standard deviations, and sample size for all illness-type conditions. As hypothesized, controlling for religiosity, ANCOVA revealed a significant main effect of illness type, $F(2, 309) = 20.83, p < .001$, partial $\eta^2 = .12$. Paired comparisons demonstrated that more favorable attitudes toward euthanasia were reported when the patient had cancer compared with either schizophrenia, $t = 2.35, p = .019, d = 0.34$, or depression, $t = 5.84, p < .001, d = 0.73$, and if the patient suffered from schizophrenia rather than depression, $t = 3.23, p = .001, d = 0.40$.

The main effect for euthanasia type was not significant, $F(1, 309) = 2.97, p = .086$, partial $\eta^2 = .01$. However, as predicted, there was a significant euthanasia type \times illness type interaction, $F(2, 309) = 4.33, p = .014$, partial $\eta^2 = .03$. Specifically, euthanasia type had a significant effect for both cancer patients, $F(1, 309) = 6.29, p = .013$, partial $\eta^2 = .02$, and for patients with depression, $F(1, 309) = 3.90, p = .049$, partial $\eta^2 = .01$. In both instances, approval was higher for patient-initiated than for family-initiated euthanasia ($M = 5.85, SD = 0.85$, and $M = 5.35, SD = 1.11$, respectively, for cancer, and $M = 4.96, SD = 1.21$ and $M = 4.54, SD = 1.18$, respectively, for depression). However, euthanasia type had no influence on attitudes toward euthanasia when the illness was schizophrenia, $F(1, 309) = .98, p = .323$, partial $\eta^2 = .003$ ($M = 5.14$,

Table 2. Means (Standard Deviations) across Illness Type for Attitudes Toward Euthanasia, Religiosity, Autonomy, Illness Controllability, Illness Stereotypes, and Social Acceptance.

	Illness type		
	Cancer <i>n</i> = 119	Schizophrenia <i>n</i> = 97	Depression <i>n</i> = 108
Attitudes toward euthanasia	5.59 (1.02)	5.23 (1.11)	4.77 (1.21)
Religiosity	2.84 (1.73)	2.59 (1.54)	2.93 (1.69)
Patient autonomy	6.04 (0.80)	4.89 (1.23)	4.86 (1.27)
Illness controllability	3.34 (0.97)	4.19 (1.16)	4.81 (0.99)
Illness stereotypes	3.47 (0.71)	4.71 (0.78)	4.17 (0.84)
Social acceptance	3.35 (0.52)	2.87 (0.53)	3.07 (0.56)

Note. Response range for the following variables: Attitudes toward euthanasia, Religiosity, Patient autonomy, Illness controllability, Illness stereotypes = 7-point scale (1 = strongly disagree and 7 = strongly agree); Social acceptance = 4-point response scale (1 = definitely not to 4 = definitely yes).

$SD = 1.19$ and $M = 5.36$, $SD = 0.99$, respectively, for patient- vs. family-initiated euthanasia).

Identical ANCOVAs were performed with each of the mediators as the dependent variable. Results revealed that illness type had a significant effect on all mediators: autonomy, $F(2, 309) = 44.43$, $p < .001$, partial $\eta^2 = .22$; illness controllability, $F(2, 309) = 57.11$, $p < .001$, partial $\eta^2 = .27$; illness stereotypes, $F(2, 309) = 76.37$, $p < .001$, partial $\eta^2 = .33$; and social acceptance, $F(2, 309) = 20.19$, $p < .001$, partial $\eta^2 = .12$. Post-hoc tests indicated that patients with cancer were perceived as more autonomous than patients with either depression, $t = 8.35$, $p < .001$, $d = 1.15$, or schizophrenia, $t = 7.72$, $p < .001$, $d = 1.11$, with no difference between the latter two groups. Conversely, the depression patients were perceived as having greater capacity to control their illness than were either the cancer group, $t = 10.64$, $p < .001$, $d = 1.49$, or the schizophrenia group, $t = 4.17$, $p < .001$, $d = 0.57$, and the schizophrenia group had greater perceived control than the cancer group, $t = 6.01$, $p < .001$, $d = 0.79$. The schizophrenia group was the subject of more negative illness stereotypes than either the cancer group, $t = 12.25$, $p < .001$, $d = 1.69$, or the depression group, $t = 5.14$, $p < .001$, $d = 0.67$, while the depression group was associated with more negative stereotypes than the cancer group, $t = 7.17$, $p < .001$, $d = 0.92$. Greater social acceptance was assigned to the cancer group compared with either the schizophrenia group, $t = 6.36$, $p < .001$, $d = 0.91$, or the depression group, $t = 3.58$, $p < .001$, $d = 0.49$, and the depression group was deemed to be more socially acceptable than the schizophrenia group, $t = 2.81$, $p = .006$, $d = 0.40$.

Neither the euthanasia type main effect nor the illness type \times euthanasia type interaction had significant effects on any of the mediators, except for a significant euthanasia-type effect on illness stereotypes, $F(1, 309) = 8.79$, $p < .01$, partial $\eta^2 = .03$. Greater negative illness stereotypes were assigned to the family-initiated compared with the patient-initiated euthanasia group, $t = 2.98$, $p = .003$, $d = 0.16$.

Mediation Analyses

The association between illness type and attitudes toward euthanasia was predicted to be mediated by perceptions of patient autonomy, illness controllability, illness stereotypes, and social acceptance. Three parallel mediator models were examined, with each comparing the effects of a pair of illnesses on attitudes toward euthanasia; see Table 3 and Figures B1 to B3 in Appendix B.

All analyses controlled for the effects of religiosity. In all analyses, the total effect and the total indirect effect, but not the direct effect, of illness type on attitudes toward euthanasia were significant. When the comparison was between cancer (coded as 1) and schizophrenia (coded as 0), the relationship between illness type and attitudes toward euthanasia was mediated positively by perceptions of patient autonomy and illness controllability. In the cancer (=1)–depression (= 0) comparison, the relationship was again mediated positively by autonomy and illness controllability. Finally, when the comparison was between schizophrenia (= 1) and depression (= 0), there was a significant positive mediation effect associated with illness controllability only.

Discussion

This study found that approval of euthanasia, although generally high, did vary with the illness of the person to be euthanized. The unique contribution of this research lies in its identification not only of important moderators (especially illness type), but also of possible mediators (especially perceived illness controllability) of attitudes toward euthanasia.

Impact of Illness Type

As expected, approval of euthanasia was shown to be greater when the patient had cancer rather than schizophrenia or depression. This finding is in line with research showing that the physically ill are perceived more positively than mentally ill patients (Corrigan, Morris, Michaels, Rafacz, & Rüschi, 2012). The current study sheds light on the reasons for the difference in attitudes toward euthanasia. Specifically, the greater approval of euthanasia for cancer patients was mediated by perceptions that these patients have greater autonomy than the

Table 3. Mediating Effects of Autonomy, Illness Controllability, Illness Stereotypes, and Social Acceptance for the Relationship Between Illness Type and Attitudes Toward Euthanasia.

Pairwise contrast	Effect of illness type	B	SE B	95% CI		Model R ²	
				Lower	Upper		
Cancer vs. Schizophrenia n = 211	Total	.386**	.134	.121	.651	.343***	
	Direct	-.196	.178	-.547	.155		
	Total Indirect	.582*	.128	.331	.837		
	Mediated by	Autonomy	.333*	.108	.147	.571	
		Controllability	.265*	.065	.157	.419	
		Illness Stereotypes	-.107	.119	-.343	.126	
		Social Acceptance	.090	.062	-.014	.232	
Cancer vs. depression n = 220	Total	.827***	.139	.553	1.10	.442***	
	Direct	-.071	.163	-.393	.251		
	Total indirect	.898**	.128	.658	1.16		
	Mediated by	Autonomy	.347*	.096	.185	.568	
		Controllability	.529*	.116	.325	.777	
		Illness stereotypes	-.013	.074	-.157	.137	
		Social acceptance	.034	.032	-.021	.107	
Schizophrenia vs. depression n = 201	Total	.415**	.145	.129	.699	.450***	
	Direct	.223	.138	-.048	.495		
	Total indirect	.191*	.100	.001	.393		
	Mediated by	Autonomy	.014	.043	-.068	.104	
		Controllability	.206*	.063	.099	.344	
		Illness stereotypes	-.004	.061	-.134	.109	
		Social acceptance	-.025	.029	-.099	.023	

Note. For cancer versus schizophrenia, cancer was coded as 1 and schizophrenia as 0; for cancer versus depression, cancer was coded as 1 and depression as 0; for schizophrenia versus depression, schizophrenia was coded as 1 and depression as 0. CI = confidence interval.

* $p < .05$. ** $p < .01$. *** $p < .001$.

mentally ill, and their illness is less controllable. This is in line with a number of studies (e.g., Fried et al., 1993; Terkamo-Moisio et al., 2017; Verbakel & Jaspers, 2010) which found that the value of individual autonomy was a robust predictor of approving euthanasia.

Two other factors may also have contributed to the impact of illness type on attitudes toward euthanasia. First, despite the vignettes expressing a common message across illness types, perhaps physical illness is more highly associated than is a mental illness with severe and unbearable pain. Second, although the vignette gave no hint of this, participants may have perceived physical illness, such as cancer, as more likely to be terminal and untreatable. A review by Hewitt (2013) notes both of these issues as obstacles in relation to the rational suicide debate for those with mental illness, but ultimately argues that both of these perceptions are flawed. In particular, she highlights that pain is not a purely physical experience, but instead involves an interaction between mind, body, and situation. She also argues that, despite advances in treatment, mental illnesses are not easily treated. Nevertheless, public perceptions—or misperceptions, as Hewitt argues—relating to these issues could have contributed to the current findings.

Even though we did not hypothesize that approval of euthanasia would differ between the schizophrenia and depression conditions, approval ratings were higher in the schizophrenia than the depression condition. Examination of the role of the mediators suggests why. In particular, participants viewed schizophrenia as less controllable than depression, and hence perhaps they viewed schizophrenia as more in need of “relief” or “escape” via euthanasia. None of the other mediation effects was significant. The nonsignificance of two of these effects (illness stereotypes and social acceptance) may be partly explained by sample characteristics: The majority of our participants were highly educated and were from middle to high socioeconomic status backgrounds, and these characteristics have, in past research, been predictive of more accepting and less highly prejudiced attitudes, especially toward the mentally ill (Eisenberg, Downs, Golberstein, & Zivin, 2009).

As hypothesized, the effects of illness type varied with euthanasia type. For patients with cancer and depression, approval of euthanasia was greater when the wish to end the patient’s life was expressed by the patient rather than the patient’s family. However, in the case of schizophrenia, levels of approval did not differ between patient- and family-initiated euthanasia. This finding cannot be explained entirely in terms of differences in perceived patient autonomy: While our data indicated that autonomy was perceived to be lower in patients with schizophrenia than in cancer patients, no such difference was evident between the two mental illnesses. A more likely explanation for the lack of a difference between approval of the two types of euthanasia in patients with schizophrenia may thus lie in the finding that, relative to the other two illnesses, schizophrenia was perceived to be more negatively stereotyped and difficult to control, with these two factors tending to shift perceptions of the locus of decision-making responsibility from patient to family.

Implications

When considering the implications of the study, a key finding was that more than five in six participants approved of euthanasia, even though this medical procedure is against the law in most countries. Dissemination of this result to community members and key stakeholders (e.g., legislators, health-care workers) could inform the debate about euthanasia and potentially hasten the convergence of opinion and legislation. This is especially true in relation to mentally ill patients. The extent of approval for euthanasia found in this study, even in cases of mental illness, suggests that the general population would view assisted suicide as acceptable under certain circumstances. The findings might also give rise to further reflection on the part of health-care workers. Given that these workers are often trained in suicide prevention, they might perceive euthanasia as a professional failure; yet the current findings may encourage the adoption of a more open-minded and self-compassionate perspective. That is, rather than viewing euthanasia of the mentally ill as a failure, viewing euthanasia for mentally ill patients in a similar way to euthanasia for physically ill patients may prevent health-care professionals experiencing false guilt and unnecessary self-blame when considering implementing euthanasia laws (i.e., the act of euthanasia), regardless of patient illness type.

Approval of euthanasia was shown to vary with illness type, with the greater reluctance to approve euthanasia in the case of mental illness because of perceptions that mentally ill patients are less autonomous and more in control of their illness than are the physically ill. The accuracy of these perceptions of autonomy and controllability requires evaluation across multiple criteria. If shown to be valid, this may inform the development of standards and thresholds pertaining to the legal euthanasia of mentally ill patients (Doernberg et al., 2016; Owen et al., 2015; Wang et al., 2016). However, assessment at the level of illness groups may not deliver just outcomes: Assessment of individual patients on these criteria is also warranted prior to considering, and possibly approving their euthanasia. Without such steps being taken, there is a risk that, as is disproportionately the case with patients who are older, female, less educated, and from low socioeconomic backgrounds (Rietjens, Deschepper, Pasman, & Deliens, 2012), the mentally ill maybe denied access to life-ending medication. This outcome may be unfair in the present case if based on unwarranted assumptions of low patient autonomy and high illness controllability.

The current study answered the call of J. Wasserman et al. (2005) to capture more of the variation in circumstances on which the public might approve or disapprove of euthanasia. This is especially so in relation to the inclusion of the family-initiated experimental condition. It seems that, compared with other

illnesses, when making end-of-life decisions regarding patients with schizophrenia, participants were more likely to consider the role of the patient's family to be as great, or the needs of the family to be as important, as those of the patient. To support this, Hardwig (1990) argues that being part of a family means making decisions on the basis of what is best for all concerned, and not simply what is best for one person. Both the prevalence of such a "shared responsibility" perspective on euthanasia decisions and the implications of it warrant examination in future research and debate.

Strengths, Limitations, and Future Directions

This study was premised on the belief that insufficient prior research has explored the role of contextual factors and mediating mechanisms underlying attitudes toward euthanasia. The study was innovative in the field of euthanasia research in using an experimental design to test specific hypotheses. This approach enabled the teasing apart of variables and the identification of these variables' independent and interactive effects on attitudes toward euthanasia. The focus was on two independent variables, illness type and euthanasia type, neither of which has been previously studied experimentally in a euthanasia context. Religiosity was also measured and statistically controlled. Importantly, the unique contributions of four potential mediators of the differential effects of illness types on attitudes toward euthanasia were identified. The study thereby added to knowledge as to whether, when, and why individuals approve of euthanasia.

The sample of this study was biased toward women, the more highly educated, and younger adults. The high levels of education could have inflated estimates of the extent of approval of euthanasia. Future research should use a more representative community sample to increase external validity. An established and valid scale to measure patient autonomy could not be located, and the two-item measure currently used had only moderate reliability. A more satisfactory multiitem scale could be developed in future studies.

Although we investigated attitudes toward end-of-life decisions for both the physically ill and mentally ill, it is important to acknowledge that we did so using separate vignettes for each illness type. In real life, there is frequently overlap between these illness types (e.g., depression among physically ill patients; Levene & Parker, 2011). Thus, future research could recognize this complexity by also examining attitudes toward the euthanasia of patients with comorbid physical and mental illnesses.

The sample of this study was recruited via a university-wide email, meaning that it consisted only of those who read the email (which advertised a number of studies) and who subsequently chose to participate in this particular study.

The resulting volunteer sample was biased toward women, the more highly educated, and younger adults. The recruitment method, and the sample characteristics that resulted, could have inflated estimates of the extent of approval of euthanasia. Future research should use a more representative community sample to increase external validity.

Research could improve and extend this study in other ways. For example, as suggested by Wittkowski, Doka, Neimeyer, and Vallerga (2015), the topic could be explored using a multimethod approach, with findings from qualitative interviews and attitude surveys complementing experimental research aimed at identifying factors deemed as prerequisite to a decision to euthanize. Experiments could manipulate other aspects of the patient, illness, or context. One variable of potential interest is the relationship between the (hypothetical) patient and the participant: Vignettes could describe the patient alternatively as a stranger or a member of the participant's family. Another possibility is to examine the impact of personal experience with euthanasia on attitudes toward euthanasia in physically and mentally ill patients (e.g., Roelands, Van den Block, Geurts, Deliëns, & Cohen, 2015). Finally, to gain a greater understanding of underlying mechanisms, experimental research could manipulate each of the mediating variables.

Conclusion

The significance of this study lies not in identifying whether euthanasia is legitimate or not, but rather in examining community attitudes toward it. Attitudes are important because one of the fundamental principles upon which democratic societies are built is majority opinion. Using a sample and method that differ from those used in most past research, the current study provided further evidence that the majority of people, at least in a Western society, approve of euthanasia. Approval was shown to vary with the interaction of euthanasia type and illness type—being strongest in the case of patient-initiated euthanasia of physically ill (cancer) patients—although, importantly, more participants expressed approval than disapproval under all combinations of euthanasia and illness types. Perceptions of patient autonomy and illness controllability were shown to be critical mediators of the obtained effects.

Appendix A

Vignettes

1. Pat is a 65-year-old retiree from Gold Coast. Pat has three children and two grandchildren. Pat was diagnosed with cancer 5 years ago, and is experiencing chronic and severe physical pain and suffering on a daily basis. Pat wishes to be put to death as Pat does not want to experience any more physical pain. (*Physical, Patient-initiated*)
2. Pat is a 65-year-old retiree from Gold Coast. Pat has three children and two grandchildren. Pat was diagnosed with cancer 5 years ago, and according to Pat's family, Pat is experiencing chronic and severe physical pain and suffering on a daily basis. Pat's family wish to end Pat's life as they believe Pat does not want to experience any more physical pain. (*Physical, Family-initiated*)
3. Pat is a 65-year-old retiree from Gold Coast. Pat has three children and two grandchildren. Pat was diagnosed with schizophrenia 5 years ago, and is experiencing chronic and severe mental pain and suffering on a daily basis. Pat wishes to be put to death as Pat does not want to experience any more mental pain. (*Mental, Patient-initiated*)
4. Pat is a 65-year-old retiree from Gold Coast. Pat has three children and two grandchildren. Pat was diagnosed with schizophrenia 5 years ago, and according to Pat's family, Pat is experiencing chronic and severe mental pain and suffering on a daily basis. Pat's family wish to end Pat's life as they believe Pat does not want to experience any more mental pain. (*Mental, Family-initiated*)
5. Pat is a 65-year-old retiree from Gold Coast. Pat has three children and two grandchildren. Pat was diagnosed with persistent depressive disorder (chronic depression) 5 years ago, and is experiencing chronic and severe mental pain and suffering on a daily basis. Pat wishes to be put to death as Pat does not want to experience any more mental pain. (*Mental, Patient-initiated*)
6. Pat is a 65-year-old retiree from Gold Coast. Pat has three children and two grandchildren. Pat was diagnosed with persistent depressive disorder (chronic depression) 5 years ago and according to Pat's family, Pat is experiencing chronic and severe mental pain and suffering on a daily basis. Pat's family wish to end Pat's life as they believe Pat does not want to experience any more mental pain. (*Mental, Family-initiated*)

Appendix B. Summary of Mediation Models Comparing Pairs of Illnesses

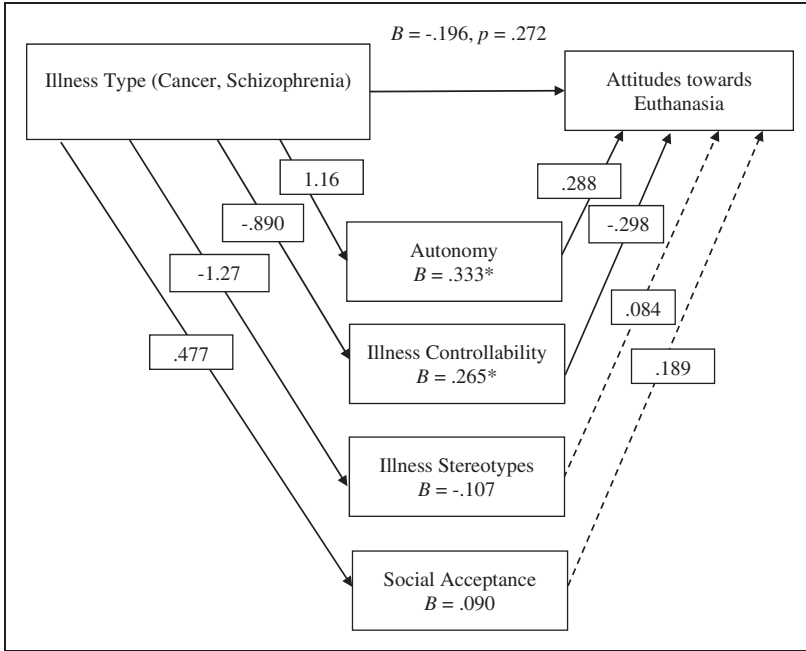


Figure B1. Direct and mediated effects of illness type (cancer = 1, schizophrenia = 0) on attitudes toward euthanasia. Note. For paths, $p > .05$, $p < .05$. For unstandardized regression coefficients (B): $*p < .05$.

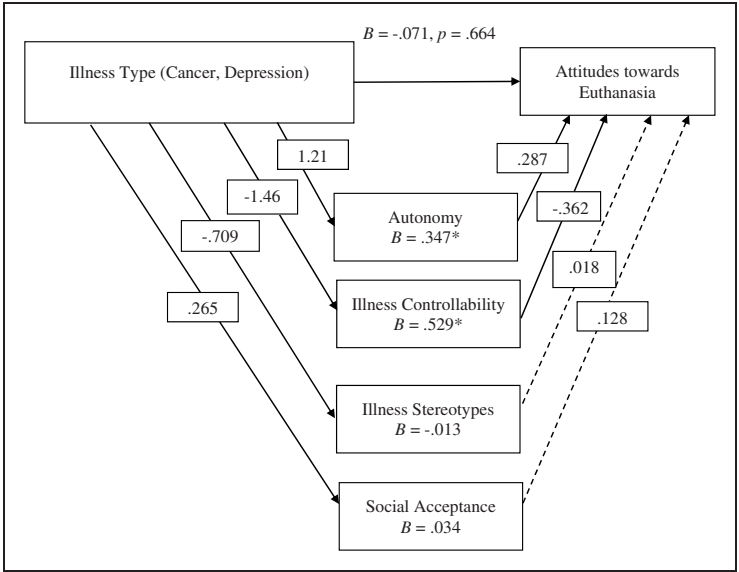


Figure B2. Direct and mediated effects of illness type (cancer = 1, depression = 0) on attitudes toward euthanasia. Note. For paths, $p > .05, p < .05$. For unstandardized regression coefficients (B): $*p < .05$.

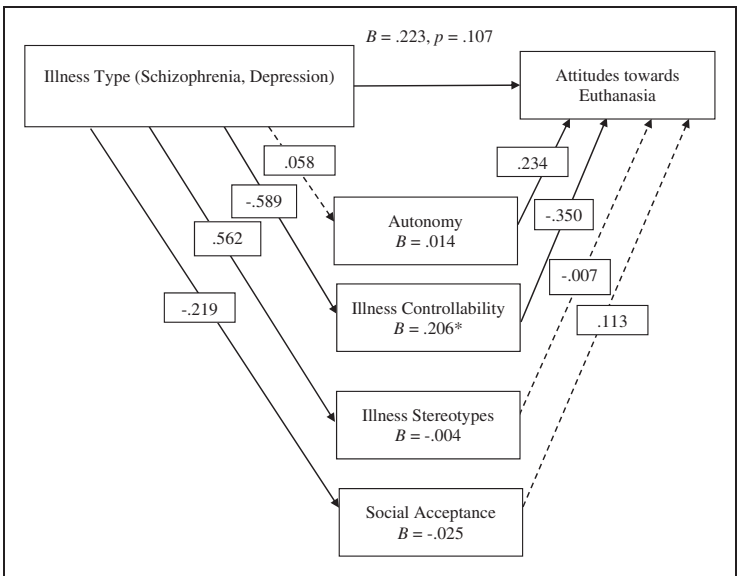


Figure B3. Direct and mediated effects of illness type (schizophrenia = 1, depression = 0) on attitudes toward euthanasia. Note. For paths, $p > .05, p < .05$. For unstandardized regression coefficients (B): $*p < .05$.

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