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Attitudes toward assisted-death services, perceived supporting norms, and emotional distress

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Although the appropriateness of assisted death services for humans has been debated by scholars from many disciplines (Cartwright et al., 2006; Cuman & Gastmans, 2017) many countries and states have developed policies to legalize the services. For example, with various qualifying conditions, assisted dying is currently legal in Switzerland, The Netherlands, Spain, Belgium, Luxembourg, Canada, Colombia, France, New Zealand, and Australia (Bellens et al., 2020; Verhofstadt et al., 2020). In many other countries, the practice remains illegal, but is the subject of public debates and controversies within communities, as well as amongst practitioners who ultimately deliver the services (Stolz et al., 2015).

There are many terminologies used to refer to assisted dying (e.g., euthanasia, assisted dying, assisted suicide, medical assistance in dying, etc.). Euthanasia is distinguished from assisted suicide (Andriessen et al., 2020). Defined narrowly, euthanasia refers to a procedure where a physician administers medication that causes a patient's death, or in the case of an animal, a veterinarian conducts a procedure to end an animal's life (Glebocka, 2018; Stolz et al., 2015). In contrast, assisted dying allows patients to hasten their own death with someone else's help. In physician-assisted dying, a physician provides medication to the patient and may give instructions on how to take it, but they do not inject the medication or help the patient to swallow it (Curry et al., 2000).

This paper focuses on the perceived psychological effects of offering assisted death services (defined inclusively to encompass all of these practices) on practitioners' own psychological distress as well as community members'. Assisted death services laws are often enacted in the face of opposition by medical associations and professional societies (Brooks, 2019). Offering assisted death services has been linked to practitioners' emotional distress (Piers et al., 2012; Range & Rotherham, 2010) and ill health (Stevens, 2006). Emotional distress is a state of emotional suffering associated with stressors and demands

that are difficult to cope with in daily life. Given this context of practitioner risk, we explore

the relationship of favorable or unfavorable attitudes and perceived norms in support of

assisted death services upon emotional distress in a variety of contexts and scenarios. Our

research questions are: 1) Are community members and practitioners with less favorable

attitudes at greater risk of distress? 2) Does normative support lower distress? and 3) Can

normative support buffer against the greater distress experienced by community members and

practitioners with less favorable attitudes in offering assisted death services? Below we

present the theoretical rationale for these research questions and review past research.

Assisted death services and distress

Although laws supporting assisted death services for human patients are

comparatively recent, a small body of research has highlighted the psychological implications

for practitioners involved in such services, as well as for community. These include

emotional pressures (Trankle, 2014), negative feelings and frustration (Bellens et al., 2020),

apprehension and discomfort (Dobscha et al., 2004), and emotional and moral distress

(Georges et al., 2008; Lokker et al., 2018; Rietjens et al., 2014; & Saladin et al., 2018). For

human health care, physicians and nurses are among the health practitioners most often

confronted with patients' requests for assisted dying and may be among those involved in

providing it when the request is approved (Meeussen et al., 2011). Practitioners' involvement

with assisted dying requests and/or providing services has been associated with distress

(Curry et al., 2000; Georges et al., 2008). A survey of 909 physicians in the USA found the

concerns that physicians reported included a sense of violating their Hippocratic oath, and a

high perceived potential for abuse. The Hippocratic oath, that affirms physicians' primary

duty to *do no harm,* for some doctors is perceived to be in conflict with providing assisted

death services, threatening the credibility of the medical profession. In addition, doctors

feared the potential for abuse in vulnerable populations and where family members or health

practitioners face financial incentives for misuse. In contrast, other themes were reported among physicians who support the legalization of assisted death services, including the belief that such services are outcomes of compassion and alleviate suffering, and that assisted death services respect patients' self-determination (Curry et al., 2000).

The roles of attitudes and norms

One implication of previous research is that the experience of distress from offering assisted death services would vary depending on practitioners' attitudes toward the practice. Empirical findings, however, are ambiguous on this point. In a descriptive analysis (Rice et al., 2008), 64% of the nurse participants reported emotional distress associated with involvement in assisted death services. Similarly, a group of participants reported feelings of distress when imagining situations in which health practitioners respond to a patient's request for assisted death services or increase morphine dosages to hasten to death for an unconscious patient (Piers et al., 2012). However, little research has examined the association between attitudes toward assisted death services and emotional distress explicitly (Range & Rotherham, 2010).

In the broader context, attitudes can be conceptualized as liking vs disliking but can also have cognitive and behavioral elements (Fazio & Powell, 1997). From this perspective, positive evaluations of a behavior would be expected to be linked to lower apprehension and anxiety when individuals are exposed to the behavior or expected to engage in it (Kato et al., 2016). However, research on controversial actions and wellbeing reveals that the association between attitudes and the mental health outcome of a specific behavior is also likely to be affected by social norms, that is, shared standards for what is seen as acceptable and right, in a given context (Terry et al., 1999). Supportive norms (that is, norms that suggest that important others endorse the action or behavior) increase the likelihood that an attitude will be expressed behaviorally (Terry et al., 1999). In addition, social norms affect the mental

health implications of enacting particular behaviors, with supportive norms generally

reducing distress (Cislaghi & Heise, 2018). However, the impact of social norms in

influencing the mental health implications of actions in the health context has not been

addressed to our knowledge.

The present research

In the present research, we test the direct and moderating effects of perceived

normative support on the association between favorable attitudes toward assisted death

services and lower levels of distress. In three studies, we invited participants who were

community members (Study 1), veterinarians (Study 2), or student health practitioners (Study

3) to consider and respond to scenarios of assisted death being offered, and to report their

perceptions of the normative support for the services, their attitudes or willingness, and their

distress.

Study 1

In Study 1, community members responded to 32 different scenarios about assisted

death services. The scenarios explored assisted death services across a range of human vs.

animal populations, with the service administered actively vs. passively (e.g., administering

lethal medication vs removing life support), and who were also sometimes described as

experiencing physical vs. non-physical pain, or suffering from a terminal vs. non-terminal

illness (See. Appendix 1). These attributes were not explored orthogonally, but rather used to

generate and examine patterns of association and within- and between-person heterogeneity

in perceived norms, attitudes, and distress for assisted death contexts. The design allowed us

to examine the association of favorable attitudes with distress, as well as the moderating role

of supportive norms, both within and across the scenario (e.g., individual level). We

employed this multi-level methodology to distinguish the variance accounted for in distress

from the fact that individuals may experience less distress if they have more favorable

attitudes to assisted death services across contexts, or if they perceive more supportive norms overall, from the variance specific to particular scenarios that are more or less normative, or that elicit more or less favorable attitudes.

Method

Design and scenarios

We employed a multi-level design to examine the associations between the focal independent variable, attitudes toward assisted death services, and the dependent measure, distress. We also examined the direct role of perceived norms, as well as whether the relationship between attitudes and distress was moderated by norms. For each scenario, participants reported their emotional distress, attitudes toward assisted death services, and perceived normative support for such services in that context. Since responses to the scenarios were measured within persons, the scenario responses (Level 1) are nested within individuals (Level 2). The associations were examined using multi-level modelling.

Participants

The survey was accessed by 127 participants using Amazon's MTurk platform. Twelve participants did not complete the survey and were excluded. An additional 19 participants were excluded due to failing an attention check.[1] In total, the data provided by 96 participants were included in the present study (54.2% male, 45.8% female, M_{age} = 39.8, SD_{age} = 11.6 years old). Participants were required to be over the age of 18 years.

Procedure

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[1] The present research was conducted in the context of a broader study, and a copy of the full questionnaire as well as an honours student thesis based on the data is available from the corresponding author on request. The attention check consisted of an item within a Moral Foundation Questionnaire (Iyer et al., 2012) that asked participants to consider the relevance of various statements when they decide whether an action is right or wrong (e.g., "Whether or not some people were treated differently than others") on a scale from "Not relevant at all" (1) to "Extremely relevant" (6). Participants were excluded if they responded to the item "Whether or not someone was good at math", with a range from 3 to 6.

Participants were recruited and compensated upon completion of the survey, which was expected to take approximately 15 minutes to complete, with $2.50 USD. Warnings were provided at the beginning of the survey that it contained content related to assisted death services, and participants were given contacts for American mental health support in the debriefing.

Participants evaluated 32 scenarios exploring assisted death services for various contexts adapted from the Attitudes Toward Euthanasia Scale (Wasserman et al., 2005). For example, in one scenario, "*A doctor has offered to end a patient's life via medication as the patient is in severe physical pain*", participants evaluated assisted death services of a human (vs. animal), who is actively offered services (vs. left to die), and who experiences physical pain (vs. non-physical pain). The scenario manipulations were not fully orthogonal, e.g., in the example above terminal illness status (vs. non-terminal illness) was not mentioned. Another scenario which did mention that status was: "A doctor has offered to end a patient's life via medication, as they have a terminal illness". Perceived norms, attitudes, and distress were measured for each scenario.

Measures

Distress. A single item was used to measure the level of assisted dying or euthanasia distress regarding the scenario, "I feel emotional distress about the use of euthanasia in this situation". Responses were recorded on a 7-point Likert scale (1 = *strongly disagree,* 7 = *strongly agree*).

Favorable attitudes. Two items were used to measure participants' favorable attitudes towards assisted death services in the situation as presented in the scenario: "I believe that euthanasia should be allowed in this situation" and "I would definitely support euthanasia in this situation". Responses were recorded on 7-point Likert scales (1 = *strongly disagree,* 7 =

strongly agree), and the items were averaged. Reliability analysis across the scenarios (α = .98) and within the scenarios (.85 - .98) both indicated highly reliable scales.

Norms. Two items were employed to measure perceived supportive norms towards assisted death services in the given situation: "the average doctor [veterinarian] would carry out euthanasia as described in this situation", and "the average doctor [veterinarian] would approve of euthanasia as described in this situation". Responses were recorded on a 7-point Likert scale (1 = *strongly disagree,* 7 = *strongly agree*), and the items were averaged. Reliability analysis again indicated that the scale was reliable across the scenarios (α = .97), and within them (.85 - .99).

Analytic strategy

A multi-level modelling analysis was conducted to investigate the direct and interactive effects of favorable attitudes and supportive norms toward assisted death services in predicting emotional distress. Level 2 analysis of individual-level variability predicted emotional distress from the attitudes and supportive norms toward the service averaged across 32 scenarios in Block 1, with the Attitudes X Norms interaction entered at Block 2. Level 1 analysis of scenario-level variability predicted distress from the attitudes and supportive norms toward assisted death services within each of the scenarios, controlling for individual-level variability, and again included the Attitudes X Norms interaction in Block 2. Below, following convention, coefficients at Level 2 are reported using the gamma symbol (γ), while coefficients at Level 1 are represented by Betas (β). The significant interactions in Level 1 and Level 2 are followed up by simple slopes analysis examining the role of attitudes in predicting distress with stronger or weaker normative support (+/-1SD).

Prior to analysis, we restructured the dataset from a wide format (i.e., each of 96 rows represents a participant and each column represents a specific variable) to a long format (i.e., each of 3072 rows represents a participant's response to a particular scenario). In the long

format data, participants have multiple rows of observations: in this case, each participant has

32 rows of data, to represent responses to 32 scenarios. An indicator variable for each row

represented the particular scenario (from 1 to 32). After restructuring the data, we checked for

potential errors and outliers through plotting individual data using spaghetti plots. No outliers

were identified in the three variables across the 32 scenarios.

Results

Descriptive analyses

We present descriptive analyses for favorable attitudes, supportive norms toward

assisted death services and distress both in the individual level and the scenario level in Table

1 and Table 2. The tables display the descriptive statistics in the individual differences data

(i.e., Level 2 when the scores were averaged across scenarios) and in the scenario data (i.e.,

Level 1, when responses to different scenarios were examined).

Table 1 and Table 2 showed that favorable attitudes toward assisted death services are

consistently negatively correlated with distress, both in the individual level data and at the

scenario level. The more favorable attitudes toward assisted death services, the lower the

distress experienced by the participants. In addition, supportive norms toward assisted death

services were negatively correlated with distress at both levels of analysis. We also found

high correlations between favorable attitudes and supportive norms. We return to this point in

the discussion, however, in the analysis below, we mean-centered the predicting variables to

reduce the effect of multicollinearity and created the interaction variable by multiplying the

mean-centered attitudes and norms.

Primary analysis

The effects of favorable attitudes and supportive norms on distress at individual level analysis (Level 2 Analysis)

Level 2 analysis examined the effects of favorable attitudes toward assisted death services and perceived supportive norms on emotional distress at the individual level, by accounting for the variability of scores across the scenarios. In Block 1 (See also Table 3), favorable attitudes and perceived supportive norms toward assisted death services accounted for 73.6% of variance in individual differences in distress, $F(2, 3069) = 4274.91$, $p < .001$. Attitudes toward assisted death services were negatively associated with distress, $\gamma = -.63$, $p < .001$, $sr^2 = .06$, 95%CI [-0.68, -0.58]. Independently, more supportive norms toward assisted death services were associated with lower distress, $\gamma = -.24$, $p < .001$, $sr^2 = .01$, CI [-.29, -.19].

In Block 2, the Attitudes X Norms interaction was significant, and explained 2% of variance in distress over and above the direct effects of attitudes and norms, $F_{ch}(1, 3068) = 252.93$, $\gamma = -.17$, $p < .001$. Simple slopes analyses were conducted at high (+1 SD) and low (-1 SD) levels of perceived normative support for assisted death services. As shown in Figure 1, when perceived normative support for assisted death services was lower, positive attitudes towards such services were negatively associated with distress, $\gamma = -.51$, $p < .001$, $sr^2 = .03$. However, when normative support was higher, the magnitude of the negative association between attitude towards assisted death services and distress was greater, $\gamma = -1.05$, $p < .001$, $sr^2 = .07$ (see Figure 1). This finding highlights a role of perceived supportive norms at the individual level in strengthening the capacity of favorable attitudes to reduce distress related to assisted death services. Inspection of the means in Figure 1 shows that perceived distress is lowest, across the scenarios, among participants who had favorable attitudes to assisted death services and perceived supportive norms.

The effects of favorable attitudes and supportive norms on distress at the scenario level (Level 1 Analysis)

For Level 1, the scenario level, individual differences were controlled in favorable attitudes, supportive norms toward assisted death services, and the interaction term. Controlling for individual differences allowed us to isolate the within-person variance between scenarios for favorable attitudes and perceived supporting norms toward assisted death services and examine their relationships to the within-person variance between scenarios in emotional distress. In Block 1 (See also Table 4), favorable attitudes and supportive norms in the scenario, and individual differences in those predictors, together accounted for 10% of the scenario level variance in distress, $F(5, 3066) = 71.08$, $p < .001$. Within the scenario, favorable attitudes toward assisted death services were negatively associated with distress: scenarios eliciting more favorable attitudes were associated with lower distress, $\beta = -.39$, $p < .001$, CI [-.45, -.32], $sr^2 = .04$. However, in contrast to the findings at the individual level, more supportive perceived norms toward assisted death services within the scenarios were associated positively with greater distress when attitudes were controlled, $\beta = .14$, $p < .001$, CI [.08, .20], $sr^2 = .01$.

In Block 2, the Attitudes X Norms interaction added less than 1% variance to the model, $F(1, 3065) = 23.04$, $p < .001$. However, there was a significant interaction of attitudes and norms on distress at the scenario level, $\beta = -.09$, $p < .001$, CI [-.12, -.05], $sr^2 = .01$, similar in pattern to the interaction at the individual level. Simple slopes analysis of the impact of favorable attitudes at high (+1SD) and low (-1SD) supportive norms showed that when the norms toward assisted death services were perceived to be less supportive, favorable attitudes across the scenario were negatively associated with distress, $\beta = -.32$, $p < .001$, CI [-.39, -.25], $sr^2 = .02$. However, when the norms were perceived to be more supportive, the negative impact of attitudes toward assisted death with distress was strengthened, $\beta = -.53$, $p < .001$, CI [-.62, -.44], $sr^2 = .04$. The pattern of coefficients for the slopes is thus the same, however, as shown in Figure 2, inspection of the means suggests that the greatest distress at the scenario

level occurred among scenarios where the norm was perceived to be more supportive, and attitudes were less favorable.

Discussion

Study 1 provides among the first empirical support for three consequential but hitherto-untested hypotheses: that supportive norms and favorable attitudes reduce distress associated with assisted death services, and those supportive norms also function in buffering the distressing impact of a controversial behavior, strengthening the association of favorable attitudes with lower distress. We found overall that perceived norms and attitudes were inter-correlated, however: participants who perceived more favorable norms reported more favorable attitudes toward assisted death services, and scenarios for which norms were perceived to be more supportive also were those in which participants were most supportive of assisted death themselves. This strong association is to be expected based on past research examining attitude-behavior relations (Dempsey et al., 2018; Terry & Hogg, 1996), but raises important questions of causality, discussed further below.

When the variables are distinguished in multi-level analyses, we find that at the individual level, both favorable attitudes and perceived normative support had independent significant negative associations with emotional distress. Those individuals who overall believe that assisted death services are supported by others, and those individuals who support such services more themselves, reported lower levels of emotional distress in considering various contexts. Given the limited and inconsistent literature to this point in examining the relationship of attitudes toward assisted death services and distress (Lokker et al., 2018; Piers et al., 2012; Range & Rotherham, 2010; Rice et al., 2008), this broad finding is itself worth highlighting. Consistent with Moore and Lucas (2021) and Rice et al (2008), the present experimental data support the contention that personal opposition and perceived normative conflict both are indicators of individual differences in risk for ill-being – or at least, for greater emotional distress.

At the within-person level, furthermore, when considering different scenarios and contexts, personal opposition again emerged as an indicator of greater risk of distress. Situations in which attitudes were less favorable were also those in which individuals experienced greater distress. An interaction effect emerged that was consistent across levels: in both cases, the negative association between favorable attitudes and emotional distress was stronger when the perceived normative support for assisted death services was higher. No

research, to our knowledge, has considered multi-level variations in individual and situational analyses of normative influence and well-being. However, the data here highlight a powerful negative association, exacerbated by normative support for the action, such that within- and between-individuals, personal attitudinal opposition to the behavior increases the distress associated with assisted death service contexts, while personal favorable attitudes are associated with lower risk.

Our findings also revealed unexpected but intriguing differences at the within-person and between-person levels. Whereas above individuals who perceived less supportive norms reported overall greater emotional distress (the direct path was negative), within the scenarios greater distress was observed when norms were perceived as more supportive (the direct path was positive), when attitudes were controlled. The shape of the interaction is also different (Figure 1 vs Figure 2); as Figure 2 highlights, in considering situational variability, the greatest distress was observed for scenarios where the norm was perceived to be more supportive and personal attitudes were less favorable.

Before seeking to interpret the differences in findings, we thought it is important to test the generalizability of the results and to address three methodological issues that affect confidence in the findings of Study 1. First, the high associations between norms and attitudes in Study 1 (Table 1) raise questions regarding the stability of the unique effects of each in the present data, as well as stability of the interaction term. Examining the impact of norms using an experimental manipulation with random assignment to conditions was deemed appropriate to seek to disentangle the two independent variables more fully. Relatedly, the high associations invite consideration of alternative causal roles for norms in influencing distress. In Study 1, we considered the direct association between norms and distress, as well as moderation of the attitude-distress association. However, a third possibility is that norms will themselves shape participants' attitudes and drive an indirect effect upon distress via this pathway. These alternative causal pathways are explored in Study 2. Finally, Study 1 examines the views of community members, but in contrast to practitioners themselves, many community members may not have direct experience of assisted dying contexts or perceive their attitudes as relevant to themselves personally. Since personal relevance and direct experience are factors which are known to affect attitude strength (Fazio & Powell, 1997), we deemed it important to consider the role of attitudes and norms in a sample of practitioners who offer assisted-death services.

In Study 2 we also sought to move beyond attitudinal support to include a specific behavioral tendency measure. It is interesting to see the highly negative associations of attitudes toward assisted death services with emotional distress, as well as with norms in community members. However, the legalization of assisted death services may have distinct psychological consequences for health practitioners and veterinarians who actually offer such service, compared to community members who have a more abstract interest in the topic. Practitioners are far more likely than community members to be involved in offering or refusing the services, and in doing so may incur particular legal, social, or emotional harms. Therefore, in Study 2 and Study 3, we looked directly at practitioners' willingness to offer assisted death services, exploring the association with emotional distress and the roles of supportive (or less supportive) social norms.

Study 2

In Study 2, practicing veterinarians were recruited and exposed to scenarios of normative vs. non-normative animal euthanasia to represent the norms variable. The veterinarians reported their willingness to provide euthanasia services, perceptions of norms, and their anticipated level of psychological distress in that context. The study thus employed an experimental between-groups design in which we could test three causal paths for normative influence upon practitioner distress: a direct effect to lower distress (consistent with the Study 1 individual difference results) or strengthen it (consistent with the Study 1 between-scenario results); moderation to strengthen the association of favorable attitudes with lower distress (as found in Study 1 in both analyses), and an indirect effect whereby norms would shape attitudes themselves, flowing on to an indirect effect upon well-being.

Method

Participants

Participants recruited were 137 currently practicing veterinarians from all states and territories of Australia. Four participants were excluded based on an attention check (i.e., "Please answer "a little" for this item") and their consent to participate, leaving 133 participants in the analysis. Participants' ages ranged from 23 to 75 years (M_{age} = 43.1, SD_{age} = 12.7) and the majority were female (75.2%; male = 24.8%). Most of the participants (63.2%) worked full-time as veterinarians, while the rest were working part-time (26.3%), casually (6.8%), on leave (1.5%) or unemployed (2.3%).[2]

Procedures

A convenience sample of veterinarians was recruited by sending an email via the Australian Veterinarian Association's e-journal, group emails sent through state veterinary boards, articles and posts in Australian veterinarian magazines, social media advertisements, and other emails sent out by the researchers in snowball sampling. Participants were invited to complete a study of veterinary well-being and euthanasia and clicked through a link to complete the study in Qualtrics. Upon reading the information sheet and providing their consent, the items measuring demographic variables were presented and completed. Participants were randomized into experimental conditions in which they responded to questions with reference to a scenario on normative vs. non-normative euthanasia. Participants were also offered a $15 e-gift card for completion of the survey. Participants in both conditions (i.e., normative vs. non-normative animal euthanasia) were presented with a scenario of a client requesting to euthanize their dog and were asked to imagine themselves as the attending veterinarian (See Appendix 2). In the normative euthanasia scenario (coded +1), the dog has arthritis, and the client is concerned that their dog is in pain and unable to enjoy basic pleasures anymore (e.g., food and walks). In the non-

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[2] The research was conducted as part of a larger longitudinal study of euthanasia attitudes, perceived norms, and distress. At Time 2, a field experiment was conducted, which is the study reported in the present paper. Copies of the full longitudinal questionnaires are available from the corresponding author on request, and the survey research findings may also be requested when these are written up.

normative scenario (coded -1), nothing is physically wrong with the dog, however owning the

dog does not fit the client's lifestyle anymore as they wish to travel. In both scenarios,

following conversations between the veterinarian and the client, the client insists that the

participant euthanize the dog. After considering the scenario, participants were asked to

complete the manipulation check item (i.e., perceived norms), as well as measures of

willingness to euthanize, and experience of distress.

Measures

Manipulation check. Participants responded to three items to evaluate perceived

norms for the euthanasia decision (e.g., "Other veterinarians would agree that the animal

should be euthanized") on 7-point scales from 1 (not at all true) to 7 (very true). Scores were

averaged to create a measure of perceived supportive norms ($\alpha = .94$).

Willingness to euthanize. Participants rated the probability that they would euthanize

the animal on a scale from 0% (not at all likely; coded 1) to 100% (definitely likely; coded

10).

Distress. Participants reported the extent to which they believed that they would

experience distressing thoughts and feelings with five items (e.g., "A situation like this would

be distressing for me", "This situation would be likely to cause stress for me") measured on a

7-point scale from 0 (not at all) to 6 (a lot). Scores were averaged to create a measure of

greater perceived distress ($\alpha = .94$).

Results

Manipulation check

An independent sample *t*-test confirmed the success of the manipulation, showing that

the participants exposed to the normative euthanasia scenario perceived more supportive

norms for euthanasia ($M = 4.5$, $SD = 1.4$) than the participants exposed to the non-normative

euthanasia scenario ($M = 1.9$, $SD = 1.0$), $t(131) = 12.28$, $p < .001$, Cohen's $d = 1.20$.

Preliminary analyses

Table 5 presents the means, standard deviations, and inter-correlations for distress, willingness to euthanize, and manipulated norms (coded 1, normative, vs. -1, non-normative). As shown in Table 5, distress was negatively correlated with both willingness to euthanize and manipulated norms, $ps < .001$. In addition, norms also had a positive association with willingness to euthanize. That is, participants considering normative euthanasia had greater willingness to euthanize than the participants considering non-normative animal euthanasia, $p < .001$.

The effects of manipulated norms, willingness to euthanize and their interaction on veterinarians' distress

Consistent with the approach that we adopted for Study 1, moderated multiple regression was first conducted to examine the associations between manipulated norms, willingness to euthanize the animal in the scenario, and situational distress. Willingness to euthanize was mean-centered, and the interaction variable was created from the result of multiplication of the mean-centered score and manipulated norms.

In Block 1, willingness to euthanize and norms were entered together to explain 51% of the variance of distress, $F_{ch}(2, 130) = 67.47$, $p < .001$. Looking at the predictors individually, participants who were more willing to euthanize the animal showed lower levels of distress, $\beta = -.50$, $p < .001$, $sr^2 = .17$. In addition, manipulated norms also had a negative influence on distress, such that those considering normative (vs. non-normative) animal euthanasia had lower levels of distress, $\beta = -.30$, $p < .001$, $sr^2 = .06$.

In Block 2, the interaction term was added to the model, and did not account for a significant increase in variance, $F_{ch}(1, 129) = 0.02$, $\beta = -.01$, $p = .900$, $R^2_{ch} < .01$. As presented in Figure 3, parallel negative associations between willingness to euthanize and distress were found for veterinarians in both normative and non-normative conditions.

Overall, the experiment supported the hypotheses that there would be a direct association between willingness to euthanize and lower psychological distress, as well as a link between supportive norms and lower distress. However, the findings do not identify a moderating role of norms on the willingness-distress relationship.

Exploratory analysis of the indirect effect of norms on psychological distress

Further exploratory analysis, in Study 2, examined whether the high correlations between norms and willingness ($r = .56$), and the willingness to euthanize and distress ($r = -.67$) were indicative of an indirect effect of norms upon distress via changing willingness. The hypothesized mediation model was tested using PROCESS computation Model 4 with SPSS by applying Bootstrapping analysis with 5000 resamples (Hayes, 2013). The data showed that norms positively predicted willingness to euthanize animals, $\beta = .56$, $p < .001$, CI [1.41, 2.36], and greater willingness negatively predicted the level of distress, $\beta = -.50$, $p < .001$, CI [-0.28, -0.15]. In addition to the negative direct effect of norms on distress as reported above, in which the participants considering non-normative situation had a greater level of distress, $\beta = -.30$, $p < .001$, CI [-0.67, -0.23], there was also a significant indirect effect via greater willingness, *standardized IE* = -.28, CI [-0.40, -0.17]. Thus, it appears that supportive norms increased participants' willingness to euthanize, by which the psychological distress could be reduced.

Discussion

The aims of Study 2 were to test the applicability of Study 1's findings in a sample of veterinarians for whom euthanasia distress is a real and directly relevant workplace stressor. We found that both willingness and group norms had negative direct associations with psychological distress, such that higher willingness to euthanize, as well as more perceived normative support led to lower levels of distress. These results replicate the findings for the individual difference analyses in Study 1, using an experimental design which allows greater

confidence in the unique roles of norms and willingness. Thus, attitudes or willingness and

group norms appear to play an important role in alleviating or worsening psychological

distress directly.

However, inconsistent with Study 1's results, group norms did not significantly

moderate the association of favorable support for euthanasia with psychological distress in

the context of animal euthanasia. That is, contrary to Study 1, group norms did not appear to

strengthen the negative association of positive attitudes toward euthanasia and distress.

Rather, in these data, norms exerted a significant indirect effect to lower distress via

strengthened willingness to provide euthanasia services.

In considering the difference between the two studies, it is important to note that there

is theoretical justification for all three of the proposed causal paths: that norms directly lower

distress (Keohane & Richardson, 2018), shape attitudes (Terry & Hogg, 1996), and moderate

the willingness-distress link. Thus, we considered that the different paths might operate with

different strengths depending on the power of norms, the different contexts (general sample

versus veterinarian) and methodologies between Study 1 and Study 2. Study 1 evaluated the

mixed context of human assisted death services and animal euthanasia services and using a

correlational design in which the inter-relationship of norms and attitudes could not be

disentangled. In contrast, Study 2, focused specifically on the animal context, focusing on a

practitioner sample (veterinarians) for whom professional norms may be expected to have a

more dominant role. Here, we found that experimentally manipulated norms had a dominant

role in driving an indirect effect on emotional distress via willingness: supportive norms led

to greater willingness, which influences lower emotional distress. If this interpretation is

supported, we might see a similar pattern representing the dominance of professional norms

for a human practitioner context: human health practitioners considering medically assisted

dying might show an impact of norms upon willingness, flowing on to lower levels of

distress. This question led us to examine the theoretical model in the context of assisted death services in health practitioner students.

Another possibility is that it was the consideration of human targets for assisted dying in Study 1 (but not Study 2) that allowed the moderation finding to emerge. Put differently, human health practitioners might well show all three normative effects: a direct association, an indirect path by shaping willingness, and a moderation effect. Again, we sought to test the applicability of the findings using a clear experimental design and targeted sample.

Study 3

The design of Study 2 was replicated in Study 3, adapted to the context of health practitioners considering scenarios of normative vs. non-normative assisted death services. The normative condition in the context of assisted death service was manipulated by exposing participants with a scenario about a terminally ill patient who requested for the service, and the patient had no mental health issues and was fully supported by their family. On the other hand, the non-normative condition was represented by the similar scenario, but did not meet some legal criteria (e.g., the patient has mental health issue).

We recruited a convenience sample of student health practitioners. The use of an experimental context with manipulated norms was again intended to provide confidence concerning the direction of causality, and to permit tests of whether manipulated norms directly lowered distress, shaped willingness, and strengthened the association between willingness and distress. By considering practitioner responses in the human health practitioner context, the design allowed us to test the consistencies and inconsistencies between Studies 1 and 2 and explore the extent to which human contexts of assisted death services showed similar or distinct normative influence pathways compared to animal contexts for veterinarians in Study 2.

On the one hand, theoretical models such as social identity theory (Tajfel & Turner, 1979; 1986) suggest that professional norms should shape practitioner behavior and responses in professional decision-making similarly across contexts: in this case, the findings for Study 2 should be closely mirrored in Study 3. If this is the case, we would expect to see negative direct effect of group norms on psychological distress, and negative association of favorable attitudes toward assisted death services with distress. On the other hand, we were unsure if strong norms would emerge to support the practice of assisted death for health practitioners, given that the practice has been opposed by some professional groups (De Bal et al., 2006; Glebocka, 2018; Verhofstadt et al., 2020). If this is the case, then we would expect that group norms might have no direct effect on psychological distress, particularly if low support (floor effects) were observed.

Method

Participants

Health practitioner students in medicine, nursing, and psychology ($N = 386$) who accessed the study were screened based on their statement on informed consent items (one participant was excluded); level of completion (96 participants were excluded); and their answer on attention check items (i.e., "Please answer '2 Disagree' on this item to show you are paying attention"; $n = 30$). The final sample of participants ($N = 259$) was predominantly female (71% female, 25% male, 2% non-binary, 2% others) and relatively young ($M_{age} = 21.0$ years, $SD_{age} = 14.4$ years).

Procedures

We recruited the participants from two convenience subsamples of Psychology students ($n = 196$ participants) and other health practitioner students ($n = 190$ participants). Psychology students were recruited through advertising to first-year psychology students completing research for course credit, targeting only students intending on a future career in

healthcare. Participants from other disciplines were recruited via student health practitioner

networks, Facebook pages and university groups on social media. In the template email or

social media post, we asked the health practitioner societies and associations to advertise the

study to their members (i.e., health practitioner students) who intend to go on to careers in

medicine, nursing, pharmacy, etc. In each case, participants clicked through a link to read an

information sheet and complete the survey in Qualtrics.

In the survey, screening questions (e.g., whether they were intending to practice as

health practitioners) were followed by demographic variables and then participants were

randomly assigned to one of two norm manipulation conditions. Participants read a scenario

in which they were a health practitioner assessing a patient for assisted death services in a

state where these are legalized. In the normative scenario (coded +1), the patient had less than

six months to live, had no mental health issues, and was fully supported by their family. The

normative condition met all legal criteria in the Australian states where the services are legal.

In the non-normative scenario (coded -1), the patient was terminally ill, but the prognosis was

unclear, they had mental health issues, and their family members were opposed to their

request. The non-normative condition met some legal criteria for suitability (e.g., terminal

illness), while not meeting others (e.g., expectations of imminent death). After considering

the scenarios, participants completed a measure of perceived norms as the manipulation

check, as well as willingness to offer assisted dying and distress measures.[3]

Measures

Manipulation check. A single item was used as a manipulation check: "In this

situation, the average health professional would offer assisted death services when requested

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[3] The study was conducted as part of a larger program of research. A copy of the full questionnaire may be obtained from the corresponding author.

by the patient". Participants were asked to rate their agreement with the statement in a 7-point

Likert rating from 1 (Strongly disagree) to 7 (Strongly agree).

Willingness to participate in assisted death services. A single item was used to

measure participants' willingness: "Based on the scenario you have just considered, how

willing would you be to provide services for this patient for voluntary assisted dying?". A 7-

point Likert rating was applied from 1 (Strongly disagree) to 7 (Strongly agree).

Distress. The extent to which participants feel distressed after exposure to the assisted

dying scenario was assessed with a single item, "To what extent is this scenario personally

distressing you?". Participants responded on a 7-point Likert scale from 1 (Not at all) to 7

(Very much).

Analysis

Manipulation check analysis

As expected, an independent sample t-test showed that participants exposed to the

normative scenario perceived more supportive norms ($M = 5.2$, $SD = 1.3$) than the

participants exposed to the non-normative scenario ($M = 2.7$, $SD = 9.1$), $t(257) = 3.11$, p

$= .002$, Cohen's $d = 6.52$.

Descriptive statistics and inter-correlation analyses

Table 6 shows the means and standard deviations of each variable involved in the

study as well as the inter-correlations. As can be seen in Table 6, unexpectedly, distress did

not correlate significantly with willingness to offer assisted death services or with norms, p

$= .490$ and $p = .258$, respectively. However, norms had a positive correlation with willingness

to participate in offering assisted-death services. Participants exposed to the normative

scenario had a significantly higher willingness to provide assisted death services than the

participants exposed to the non-normative scenario, $p < .001$.

The effects of manipulated norms, willingness to euthanize and their interaction on psychological distress

Moderated multiple regression was conducted to examine the associations between manipulated norms, willingness to provide assisted death services in the scenario, and situational distress. Willingness to provide assisted death service was mean-centered, and the interaction variable was created from the result of multiplication of the mean-centered score and manipulated norms.

As presented in Table 7, in Block 1, the model was not statistically significant with < 1% of the distress variance explained by the willingness and norms variables, $F_{ch}(2, 255) = 1.57$, $p = .210$. Consistent with this null finding, the direct effects of willingness to participate in providing assisted death services and norms on distress were not significant, $\beta = -.10$, $p = .176$ and $\beta = .11$, $p = .104$.

In Block 2, however, there was a significant interaction between norms and willingness on distress over and above the direct effects of the two predictors in Block 1, $F_{ch}(1, 254) = 6.92$, $p = .009$, $R^2_{ch} = .03$. More specifically, the interaction variable had a significantly negative association with distress, $\beta = -.16$, $p = .009$, CI = [-0.29, -0.04]. Overall, the model examining the direct effects of willingness to participate in providing assisted death services, norms, and the interaction between those two predictors on distress was significant, $F(3, 254) = 3.38$, $p = .019$, $R^2 = .04$.

To follow up the significant interaction effect on distress, simple slope analyses were conducted to examine the association between willingness and distress in the normative and non-normative conditions. As presented in Figure 4, in the non-normative assisted death condition, there was no significant association of willingness to participate in providing assisted death services with distress, $\beta = .08$, $p = .494$, CI = [-0.11, 0.22]: distress was uniformly high. However, in the normative condition, there was a negative association

between higher willingness to participate in providing assisted death services and lower

distress, β = -.31, p = .004, 95%CI = [-0.47, -0.09], sr^2 = .03. In the normative condition,

participants who were more willing to provide such services had lower levels of distress.

Exploratory analysis of the indirect effect manipulated norms on psychological distress

A second analysis was then conducted to replicate the test of the indirect analysis

observed in Study 2 and examine the possible indirect effect of norms upon distress via

changing willingness. The hypothesized mediation model was tested using PROCESS

computation Model 4 with SPSS by applying Bootstrapping analysis with 5000 resamples

(Hayes, 2013). Normative condition positively predicted willingness to offer assisted death

services, β = .45, p <.001, CI [0.59, 0.96], but willingness did not significantly predict the

level of distress, β = -.09, p =.176, CI [-0.21, 0.04]. Further analysis showed the non-

significant direct effect of norms on distress as reported above, β = .11, p =.256, CI [-0.08,

0.30], and also confirmed that the indirect effect via willingness was not significant,

standardized IE = -.07, CI [-0.16, 0.03].

Discussion

Study 3 was consistent in identifying a role for norms in shaping psychological

distress in assisted death contexts. However, in contrast to Study 2 findings, the associations

of willingness to offer assisted death services and supportive group norms with lower

emotional distress were not significant. Instead, an interaction was observed, such that a

negative association of willingness with emotional distress was only found when the assisted

death services were conducted in a normative context (i.e., supported by the professional

communities involved). In the human context, when exposed to a scenario of non-normative

assisted death services, practitioner distress was uniformly high. Although the findings stand

in contrast to the findings in animal euthanasia context, the role of norms in strengthening a

negative association of support for assisted dying with lower emotional distress is congruent with the findings in multi-level context in Study 1.

Taken together, the findings again show the importance of norms in shaping distress, but also suggest that the context (e.g., animal euthanasia or human assisted death services) and the population (e.g., general population or professional community members) are additional critical factors in understanding the implications of offering assisted-death services for the mental health of people involved. In the human health context (as in Study 1), group norms enhanced the negative association of positive attitudes toward assisted-death services with emotional distress (or put differently, unwillingness to offer services is associated with high distress). In this sense, it is the interplay of professional norms for assisted-death services and personal willingness that affect student practitioners' risk profiles in the context of the legalization of medically assisted dying.

General discussion

Across three studies, we found that group norms played a significant role in influencing community members' and health practitioners' feelings of distress in terms of their engagement in assisted-death services. We found that norms play a significant role in shaping distress in three distinct ways. *First*, we found evidence that norms can moderate or qualify the effect of favorable attitudes and willingness such that they strengthen the association of favorable support (Study 1) or higher willingness (Study 3) with lower distress. *Second*, Study 1 and 2 demonstrated that norms have direct effects in lowering distress. *Finally*, norms also appear to shape distress indirectly via willingness to engage in assisted-death services (Study 2), where norms are associated with greater willingness (Studies 2 and 3) and willingness, in turn, is associated with lower emotional distress (Study 2 only).

The studies provide among the first empirical data, to our knowledge, to illuminate the important ongoing debate about the mental health implications of assisted-death services

on practitioners and the controversies that arise. There are many prominent sources of

emotional distress amongst community members and health practitioners when they

contemplate requests for assisted-death services. Previous research has flagged that

practitioners' emotional distress may be associated with negative attitudes (Dobscha et al.,

2004; Rietjens et al., 2014; Saladin et al., 2018; Stevens, 2016). The present studies affirm

these associations between distress and unfavorable attitudes (Beuthin et al., 2018). More

specifically, in Study 1 and 2, unfavorable attitudes were associated with greater distress in

response to assisted-death services scenarios for community members (in Study 1) and for

practitioners (in Study 2).

Across three studies, the findings from Studies 1 and 2 also support the view that

supportive norms may directly reduce distress from considering the service. This finding is

consistent with the broader contention that supportive norms can reduce the discomfort

associated with harm-doing (Amiot et al., 2013; Amiot et al., 2020). Another interpretation of

the same finding arises, however, from the absence of a control condition: it may be that

among different social categories of participants in the studies, non-normative assisted dying

scenarios may be associated with increased distress due to the perception of unmitigated

suffering. Future research should seek to replicate the experimental designs of Studies 2 and

3 by considering contexts in which (for example) suffering is presented without an

opportunity being given for assisted-death services to be offered, so that a baseline control

condition is explicitly part of the design.

The findings are also consistent with a previous study (Amiot et al., 2020) in showing

that euthanasia distress may arise not just among situations where participants' attitudes are

unfavorable, but when the behavior is normatively supported (See. Figures 2 & 4).

Conversely, distress can arise also when individuals have favorable attitudes toward assisted-

death services, but normative support is missing (See Figure 1). This finding reinforces

themes arising in qualitative research among practitioners, highlighting that distressing factors with assisted-death services may not only be associated with the presence of the service itself, but also to a lack of the environmental, collegial, and organizational supports (or ambiguity and conflict) so that the service cannot be properly decided and delivered (De Bal et al., 2006; Lokker et al., 2018; Pesut et al., 2020).

Another point concerning the distressing effects of misalignment between attitudes and norms is that previous research has emphasized that clear distinctions between assisted-death protocols when such services are appropriate and legal versus inappropriate are very important for health practitioners (Rietjens et al., 2014). The patterns in Figure 2 and Figure 3 are consistent with qualitative research highlighting that exposure to euthanasia situations can be associated with distress among practitioners who are opposed to the practice. For example, moral dilemmas have been observed for health practitioners, because they feel powerless and no longer successful in treating patients' symptoms, or worried about violating their oath to cause no harm (Curry et al., 2000; Georges et al., 2008). In this sense, introducing assisted-death services when these are still widely opposed by practitioners, and norms are not seen as supportive, might be associated with the worst well-being outcomes for practitioners. Future comparative work could be conducted to test this hypothesis directly, examining contexts in which assisted-death services were legalized with more or less practitioner support. Overall, the broader point is that social norms about assisted-death services matter in determining how the members of the community and/or health practitioners feel about those services. Further, it is clear that oppositional norms and unfavorable attitudes create potential risk for future mental health outcomes.

In Studies 2 and 3, an additional limitation that must be acknowledged is with regards to the measurement and manipulation of norms from only one referent group (i.e., practitioners' professional group). Because social norms are defined as group standards of

behavior, the specific reference groups that define the norm are important to individuals'

motivations to act (Amiot et al., 2020; Terry & Hogg., 1996). In the context of assisted-death

services, it may be presumed that the voices of physicians and other practitioners involved

will determine how the public will develop attitudes toward the practices. In the present data,

favorable attitudes toward assisted-death services in Study 1 and willingness in Studies 2 and

3 were indeed associated strongly with perceived normative support from practitioners (i.e.,

doctors and veterinarians). However, there are other possible referents, such as political and

religious authorities, who may put forward views on assisted death services. The legalization

of assisted death services has in fact not been consistently associated with deference to health

practitioner norms, which are sometimes persistently oppositional, and yet over-ridden by

politicians at the behest of communities (Inghelbrecht et al., 2009; Pesut et al., 2009). The

possibility that other referent group norms are influential in the health context for human

patients is one explanation for the lack of an association between willingness to offer

assisted-death services and manipulated norms in Study 3. Future research examining health

practitioners' willingness should consider norms from other referent groups (such as religious

or political groups) and the role that these alternative norms play in shaping practitioners'

attitudes and distress.

Turning to the applied implications of these findings, it should be noted that those

who personally support assisted-death services may choose to limit their involvement in the

absence of perceived adequate legal and practice supports (Pesut et al., 2020; Pesut et al.,

2020). However, the lack of normative support for assisted dying itself may be distressing for

those practitioners. Alternatively, for those who find themselves in contexts when they

oppose assisted-death services, and it is normative, considerable distress may be reported

(See Figure 2). The changing norms across discrete contexts repeatedly measured in Study 1

may also be associated with more variability in distress than the power of norms within a

single context, where norms may operate to homogenize the variance as much as change the level of the means (Louis et al., 2003). Longitudinal research that follows health practitioners' norm perceptions for various reference groups, alongside their willingness to offer assisted death services, and their experiences of distress and mental illness, would be of great value in illuminating these connections.

Another applied implication is that, taken at face value, attempts to reduce emotional distress related to the decision and delivery of assisted death services can focus on norms-based interventions. Put differently, according to Study 1, the greatest distress in the present data is found when individuals are acting in contexts where they personally oppose the behavior, and it is normatively supported. However, in Study 3, the greatest distress is found when practitioners support the action, but the norms did not support it. Qualitative research to explore these differences, and consideration of the normative context across a range of references, including the organization itself, could therefore also be important in organizations' provision of employee guidance and support programs.

The present research is strengthened by a mixed-methods approach, with a multi-level design (Study 1), as well as between group random experiments (Study 2-3) and with general community samples (Study 1) as well as samples directly implicated in offering assisted death services (Study 2-3). This strength is particularly important given that different patterns of associations are reported (at least concerning the direct role of normative situation upon distress). Future research should take advantage of multi-level and random experimental paradigms to explore within- and between-person effects more deeply, and in particular to examine changing perceptions of norms, willingness and distress over time (e.g., comparing contexts in which legalization has occurred with contexts in which it has not).

Longitudinal research with practitioners' real assisted death services provision would also address another limitation in the present research. The use of scenarios allows for more

experimental control, but it is a weakness that the data are explored hypothetically.

Responses to scenarios may not mirror practitioners' actual experiences of distress. However,

it should be noted that many or all of our human health practitioner student participants may

be expected to encounter assisted death services, as they are increasingly widely offered and

debated. As noted above, as the practices are normalized (or rolled back) over time, it may

also be valuable to consider longitudinal research to explore norm changes as practitioners

engage in the workforce. Considering the applied importance of this context, we encourage

future scholars to seek to replicate these findings longitudinally in health practitioners'

context and with community samples for whom the issue is personally relevant, and in so

doing to make a stronger contribution to the study of how social norms shape the mental

health implications of particular attitudes and behaviors.

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Tables

Table 1. Means and inter-correlations at Level 2 (individual differences across scenarios)

Variables	Mean (SD)	Fav. Attitudes	Supportive norms	Distress
Averaged across scenarios				
Favorable attitudes (1-7)	4.24 (1.15)		.93***	-.85***
Supportive norms (1-7)	4.04 (1.12)			-.82***
Distress (1-7)	4.55 (0.43)			

*p <.05, ** p <.01, *** p <.001

Table 2. Means and inter-correlations at Level 1 (responses to scenarios).

Variables	Mean (SD)	Fav. Attitudes	Supportive norms	Distress
Raw score				
Favorable attitudes	4.21 (2.26)		.81***	-.31***
Supportive norms	3.96 (2.17)			-.22***
Distress	4.53 (2.06)			

*p <.05, ** p <.01, *** p <.001

Table 3. The association of favorable attitudes toward euthanasia with distress moderated by norms at the level of individual differences (Level 2)

Predictors	Distress		
	γ	p	95%CI
Block 1, $F(2,3069) = 4274.91$, $p <.001$, $R^2 = .73$			
Favorable attitudes toward euthanasia	-.63	<.001	-.68, -.58
Supportive norms	-.24	.001	-.29, -.19
Block 2, $F(1,3068) = 252.93$, $p <.001$, $R^2ch = .02$			
Attitudes x norms	-.17	<.001	-.19, -.14
Simple slopes analysis			
Favorable attitudes when supportive norms are low	-.51	<.001	-.55, -.46
Favorable attitudes when supportive norms are high	-1.05	<.001	-1.12, -.98

Table 4. The association of attitudes toward euthanasia with distress moderated by norms for different scenarios (Level 1)

Predictors	Distress		
	β	p	95%CI
Block 1, $F(5, 3066) = 71.08$, $p <.001$, $R^2 = .10$			
Favorable attitudes toward euthanasia in the scenario	-.39	<.001	-.45, -.32
Supportive norms in the scenario	.14	.001	.08, .20
Individual differences in attitudes toward euthanasia	.02	.717	-.08, .12
Individual differences in perceived supportive norms	-.07	.197	-.18, .04
Interaction of attitudes X norms at individual level	-.05	.016	-.09, -.01
Block 2, $F(1, 3065) = 23.04$, $p <.001$, $R^2_{ch} < .01$			
Attitudes x norms in the scenario	-.09	<.001	-.12, -.05
Simple slopes analysis			
Favorable attitudes when supportive norms are low	-.32	<.001	-.39, -.25
Favorable attitudes when supportive norms are high	-.53	<.001	-.62, -.44

Table 5. Descriptive statistics and inter-correlation analysis in Study 2

Variables	Mean (SD)	(1)	(2)	(3)	(4)
(1) Norms (1= normative, vs -1 = non-normative)	0.0 (1.0)		.56***	-.58***	.73***
(2) Willingness to offer euthanasia services	6.3 (3.4)			-.67***	.72***
(3) Distress	3.0 (1.5),				-.61***
(4) Manipulation Check	3.2 (1.6)				

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

Table 6. Descriptive statistics and inter-correlation analysis in Study 3

Variables	Mean (SD)	(1)	(2)	(3)	(4)
(1) Norms (1 = normative, -1 = non-normative)	0.0 (1.0)		.45***	.07	.19**
(2) Willingness to offer euthanasia services	4.8 (1.7)			-.04	.16*
(3) Distress	4.1 (1.6)				-.02
(4) Manipulation Check	3.9 (6.6)				

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

Table 7. Moderated multiple regression results for distress in Study 2

Variable		Distress				
		β	p	95% CI		sr^2
				LL	UL	
Block 1						
R^2	.51					
Willingness to participate		-.50	< .001	-0.28	-0.15	.17
Norms (normative vs. non-normative)		-.30	< .001	-0.67	-0.23	.06
Block 2						
R^2_{ch}	.00					
Willingness * Norms		-.01	.900	-0.07	0.07	<.01
Final R^2	.51					

Table 8. Moderated multiple regression results for distress in Study 3

Variable		Distress				
		β	p	95% CI		sr^2
				LL	UL	
Block 1						
R^2	.01					
Willingness to participate		-.10	.176	-0.21	0.04	<.01
Norms (normative vs. non-normative)		.11	.104	-0.04	0.39	.01
Block 2						
R^2_{ch}	.03					
Willingness * Norms		-.16	.009	-0.29	-0.04	.03
Final R^2	.04					
Simple slopes analysis						
- Non-normative scenario						
Willingness to participate		.08	.494	-0.11	0.22	<.01
- Normative scenario						
Willingness to participate		-.31	.004	-0.47	-0.09	.03

Appendices

Figures

Figure 1. Simple slope analysis for the moderating effect of norms on the association of

attitudes toward assisted death services and distress at the individual level.
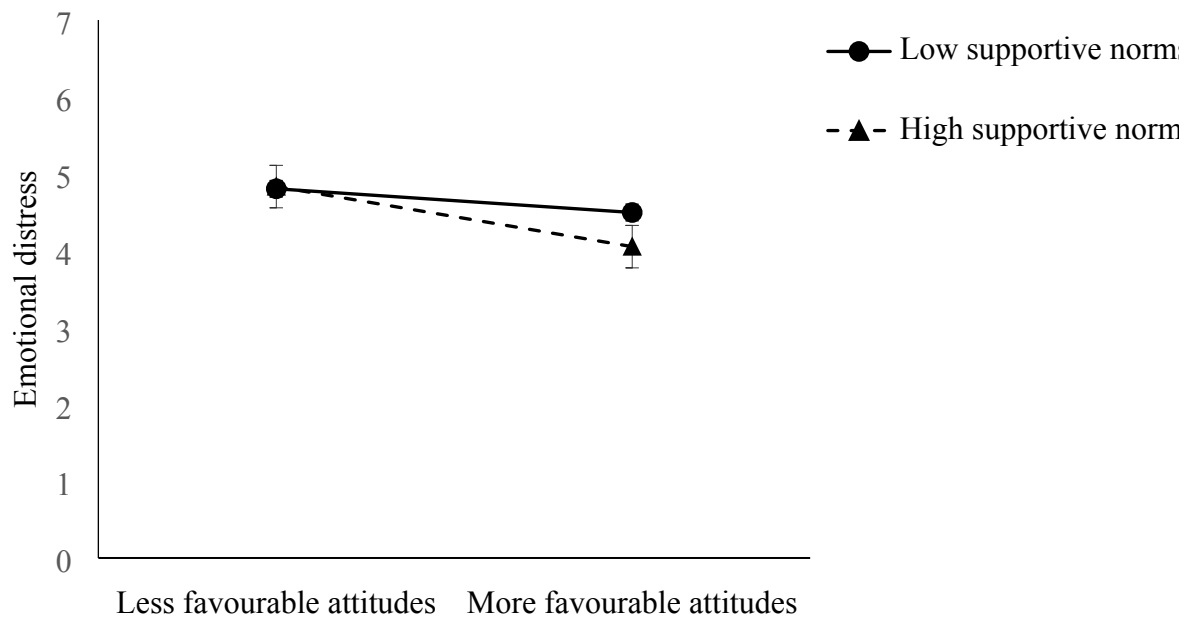
Note. Error bars represent ± 1 standard error from the mean.

Figure 2. Simple slope analysis for the moderating effect of norms on the association of

attitudes toward assisted death services and distress at the scenario level.
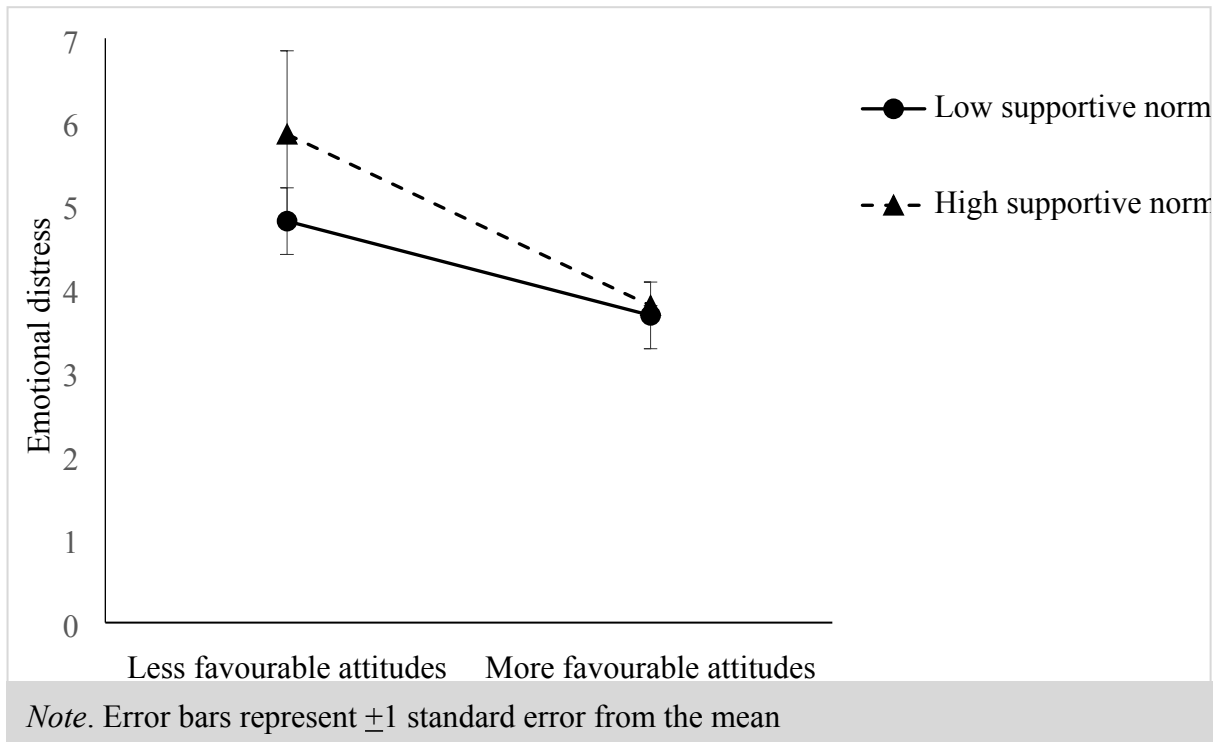

Note. Error bars represent ±1 standard error from the mean

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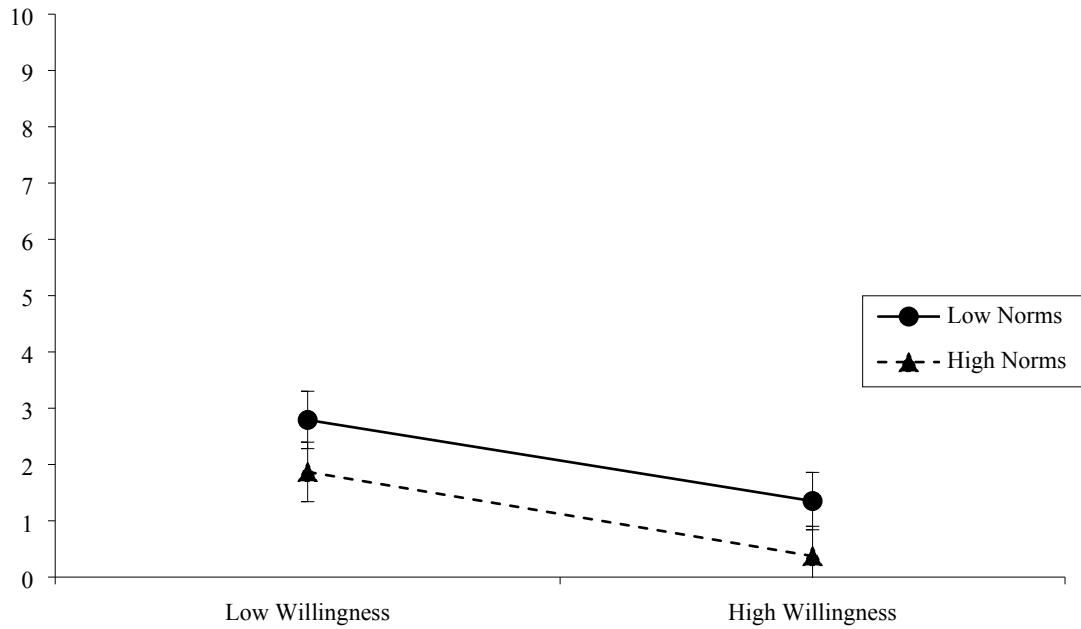48
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Figure 3. Simple slopes analysis shows there is no interaction between willingness to

euthanize and norms in predicting the level of participants'

Note. Error bars represent ±1 standard error from the mean
distress in Study 2.

Figure 4. Simple slopes analysis of the significant interaction effect of willingness to participate in providing assisted death services and norms on distress level in Study 3
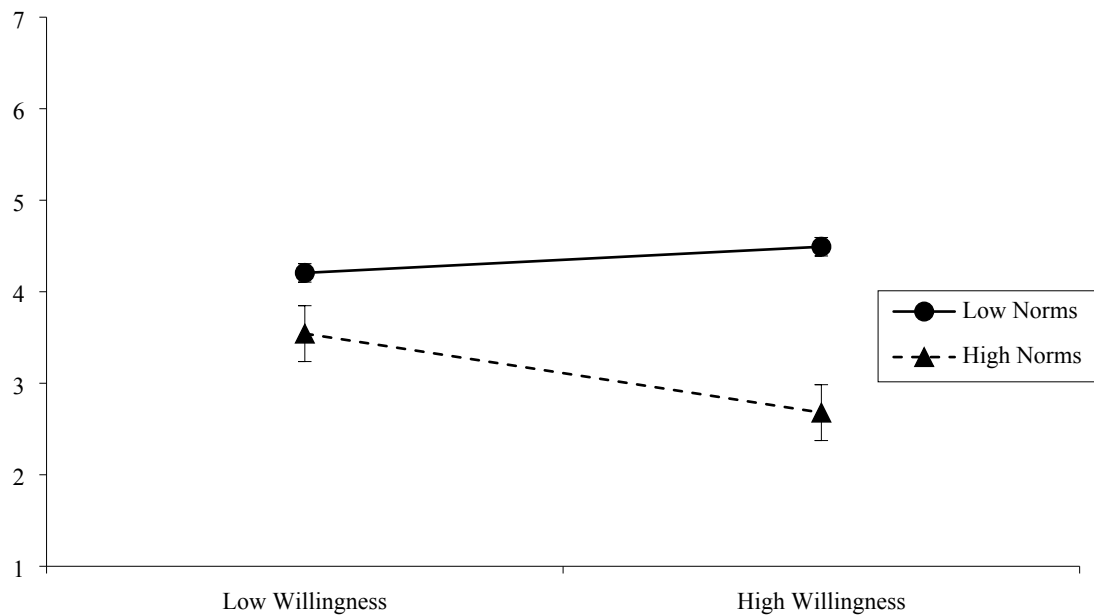
Note. Error bars represent ±1 standard error from the mean

Appendices

Appendix 1. Scenarios used to examine normative contexts for euthanasia.

Scenario	Human vs. Animal	Euthanized vs. Left to die	Active vs. passive	Physical pain vs. non-physical pain	Terminal vs. non-terminal illness	The scenario
1	human	euthanized	active	physical	N/A	A doctor has offered to end a patient's life via medication as the patient is in severe physical pain.
2	human	left to die	active	physical	N/A	A doctor has offered to end a patient's life by removing life support as the patient is in severe physical pain.
3	human	euthanized	active	non-physical	N/A	A doctor has offered to end a patient's life via medication as the patient is in severe emotional pain.
4	human	left to die	active	Non-physical	N/A	A doctor has offered to end a patient's life by removing life support as the patient is in severe emotional pain.
5	human	euthanized	active	N/A	Terminal	A doctor has offered to end a patient's life via medication, as they have a terminal illness.
6	human	Left to die	active	N/A	Terminal	A doctor has offered to end a patient's life by removing life support, as they have a terminal illness.
7	human	euthanized	active	N/A	Non-terminal	A doctor has offered to end a patient's life via medication, as they have a mental illness.
8	human	Left to die	active	N/A	Non-terminal	A doctor has offered to end a patient's life by removing life support, as they have a mental illness.
9	human	euthanized	passive	Physical	N/A	A patient with severe physical pain has requested that their doctor prescribes enough medication to end their life.
10	human	Left to die	passive	Physical	N/A	A patient with severe physical pain has requested that their doctor removes life support to end their life.

Scenario	Human vs. Animal	Euthanized vs. Left to die	Active vs. passive	Physical pain vs. non-physical pain	Terminal vs. non-terminal illness	The scenario
11	human	euthanized	passive	Non-physical	N/A	A patient with severe emotional pain has requested that their doctor prescribes enough medication to end their life.
12	human	Left to die	passive	Non-physical	N/A	A patient with severe emotional pain has requested that their doctor removes life support to end their life.
13	human	euthanized	passive	N/A	Terminal	A patient with a terminal illness has requested that their doctor prescribes enough medication to end their life.
14	human	Left to die	passive	N/A	Terminal	A patient with a terminal illness has requested that their doctor removes life support to end their life.
15	human	euthanized	passive	N/A	Non-terminal	A patient with a mental illness has requested that their doctor prescribes enough medication to end their life.
16	human	Left to die	passive	N/A	Non-terminal	A patient with a mental illness has requested that their doctor removes life support to end their life.
17	Animal	euthanized	active	Physical	N/A	A dog experiencing severe pain will be euthanized by a veterinarian
18	Animal	Left to die	active	Physical	N/A	A dog experiencing severe pain will be anaesthetized and allowed to die naturally
19	Animal	euthanized	active	Non-physical	N/A	A rescued dog will be euthanized as there is not enough space remaining in the shelter
20	Animal	Left to die	active	Non-physical	N/A	A dog has stopped eating due to a change of environment, so it is left to die
21	Animal	euthanized	active	N/A	terminal	A monkey with a terminal illness will be euthanized by veterinarian
22	Animal	Left to die	active	N/A	terminal	A monkey with a terminal illness is anaesthetized and allowed to die naturally
23	Animal	euthanized	active	Non-physical	Non-terminal	A monkey is euthanized for use in scientific research

Scenario	Human vs. Animal	Euthanized vs. Left to die	Active vs. passive	Physical pain vs. non-physical pain	Terminal vs. non-terminal illness	The scenario
24	Animal	Left to die	active	Non-physical	Non-terminal	A monkey is released into an environment where it cannot survive
25	Animal	euthanized	active	Physical	N/A	A goldfish with a condition causing severe pain is euthanized by a veterinarian
26	Animal	Left to die	active	Physical	N/A	A goldfish with severe pain from a damaged fin is anaesthetized and allowed to die naturally
27	Animal	euthanized	active	Non-physical	Non-terminal	A goldfish is euthanized as it is no longer wanted
28	Animal	Left to die	active	Non-physical	Non-terminal	A goldfish is left to die as it is no longer wanted
29	Animal	euthanized	active	N/A	terminal	A chicken with a terminal illness is euthanized by a veterinarian
30	Animal	Left to die	active	N/A	terminal	A chicken with a terminal illness is anaesthetized and allowed to die naturally
31	Animal	euthanized	active	Non-physical	Non-terminal	A chicken that no longer lays eggs is euthanized as it is no longer wanted
32	Animal	Left to die	active	N/A	Terminal	A chicken with a deformed beak is unable to eat so is left to die

Appendix 2. Scenarios applied in Study 2

Normative condition

You are approached by a client who has brought their pet dog to you. The dog is in quite a lot of pain due to arthritis in its hind legs which is impairing the dog's movement. The owner is interested in putting the animal down. When you ask why they would like to euthanize the animal the owner indicates that the dog does not fit to his/her living conditions anymore because he/she wants to travel with the family. The owner indicates that they do not desire to continue caring for the dog given that their life has recently gotten busy with family commitments. You have had a long discussion about alternatives, but the client insists that you euthanize the dog.

Non-normative condition

You are approached by a client who has brought their pet dog to you. The dog has nothing physically wrong, but the owner is interested in putting the animal down. When you ask why they would like to euthanize the animal the owner indicates that the dog does not fit to his/her living conditions anymore because he/she wants to travel with the family. The owner indicates that they do not desire to continue caring for the dog given that their life has recently gotten busy with family commitments. You have had a long discussion about alternatives, but the client insists that you euthanize the dog.

Appendix 3. Scenarios applied in Study 3

In the following section, imagine yourself as a health practitioner in a scenario where a patient is requesting services for voluntary assisted dying in a state where it is legalized. Please consider the scenario carefully and answer the two follow-up questions as though you were the health practitioner.

Manipulation 1 – Normative condition

John Smith comes into your office for consultation about voluntary assisted dying. John has been your patient for more than 3 years. He is currently suffering from cancer that has become increasingly painful and aggressive. His condition is terminal, and the oncologist has given him less than six months left to live. He is a sharp, confident man, with no mental health issues. His family fully support his request for voluntary assisted dying.

Manipulation 2 – Non-normative condition

John Smith comes into your office for consultation about voluntary assisted dying. John is a new patient whom you have never seen before. He is currently suffering from cancer that has become increasingly painful and aggressive. His condition is terminal, but the oncologist is unsure how long he has left to live. He is an anxious, confused man, who seems to have mental health issues. His family are opposed to his request for voluntary assisted dying.