

Exploring the views of Swedish Medical Students on Physician- Assisted Dying: A Quantitative and Qualitative Analysis

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Abstract

Background

Physician-assisted dying (PAD) remains prohibited in Sweden despite increasing public and professional support, and ongoing societal debate. Since medical students are future physicians, they constitute a relevant group for studying potential shifting attitudes to PAD. The present study examined Swedish medical students' attitudes toward PAD, explored how ethical reasoning and individual characteristics relate to these attitudes, and assessed whether value-laden terminology influenced responses.

Methods

A cross-sectional mixed-methods study was conducted among medical students from all semesters and at all seven Swedish medical faculties (2024–2025). Two parallel questionnaires, differing only in terminology (“physician-assisted dying” versus “physician-assisted suicide”), were electronically distributed and included a clinical vignette, structured questions, and free-text responses. Quantitative data from the questionnaires were analysed using chi-square tests and qualitative data using thematic analysis. In total, 2,107 responses were included (response rate 23%).

Results

Overall, 57% of the participants supported legalisation, 23% opposed it, and 20% were undecided; 53% reported willingness to personally assist if legal, while 68% opposed mandatory participation. No significant differences were observed between questionnaire versions. Prioritisation of autonomy was associated with support for PAD and willingness to assist, whereas prioritisation of non-maleficence and beneficence was associated with opposition or uncertainty ($p < .001$). Religious belief was associated with more restrictive attitudes ($p < .001$). Qualitative findings highlighted tensions between autonomy, professional responsibility, and concerns about societal and clinical consequences.

Conclusions

The findings suggest that Swedish medical students generally hold favourable attitudes toward PAD, reflecting a possible shift compared with previous studies. Nevertheless, views remained highly polarised, with respondents presenting strongly argued positions on both sides of the debate. The results did not support a substantial influence of value-laden terminology. Rather, they highlight the importance of underlying ethical frameworks and religious beliefs in shaping attitudes toward PAD.

Background

Physician-assisted dying (PAD), also referred to as medically assisted dying, is currently not permitted within the Swedish healthcare system (May 2026). Physicians who engage in PAD, even outside their employment hours, risk losing their medical license, although assisting suicide is not in itself a criminal offense under Swedish law (1). Over the past three decades, Sweden has seen recurring public and professional debate on whether PAD should be legalised, most often with reference to the Oregon model (2) as a potential framework.

This debate has intensified in recent years, coinciding with increasingly favourable public attitudes toward PAD in Sweden. Population-based survey research and national opinion polls indicate sustained majority support for legalisation, with a recent national survey suggesting that approximately 80% of the Swedish public believe PAD should be permitted (3, 4). Attitudes within the medical profession are more heterogeneous. Survey data from 2021 suggest that slightly less than half of the Swedish physicians support legalisation, with substantial variation between medical specialties (5). Nonetheless, longitudinal evidence indicates a gradual shift toward more permissive views over recent decades (6, 7).

Internationally, medical students' attitudes toward end-of-life decisions, including PAD, have been shown to be influenced by clinical experience, religious beliefs, and cultural or geographic context (8). As future healthcare providers, medical students constitute a particularly relevant group for studying shifting attitudes to ethically controversial practices, as they are transitioning from the general population into the medical profession. How this transition affects their views on PAD, and how such attitudes develop over time, remains insufficiently studied. The most recent Swedish study, conducted in 2001–2003, found that approximately half of medical students held negative attitudes toward euthanasia, about one third were positive, and the remainder undecided (9).

Given the international trend toward broader legalisation of PAD in several Western countries (10), the present study aims to examine contemporary attitudes among Swedish medical students toward PAD according to the Oregon model.

Methods

The aim of the present study was to examine attitudes toward PAD among Swedish medical students, and to assess whether value-laden wording, ethical prioritisations, and individual background factors influence students' attitudes on the issue. We also explored their views on how the professional responsibility for PAD should be distributed and whether the use of different terminology influenced responses to ethically sensitive questions.

The study used a mixed method's approach, combining a quantitative and a qualitative part. Inclusion criteria required that participants, during the autumn semester of 2024, were enrolled medical students at one of the seven medical faculties in Sweden and therefore registered as medical students with an associated email address. Students were invited to participate in the study via email invitations distributed digitally through the survey platform REDCap electronic data capture tool hosted at Lund University (11, 12).

Two questionnaires (see Appendix) were developed, each comprising a patient scenario followed by ten questions. The questionnaires were identical except that one used the term physician-assisted *dying* and the other physician-assisted *suicide* to refer to the same practice. The responses per faculty are presented in Table 4. Questionnaire 1 (Physician-Assisted Dying = PAD) was sent to 4,635 student email addresses from the medical faculties in Gothenburg (1,564), Lund (1,391), and Karolinska Institutet in Stockholm (1,680). Questionnaire 2 (Physician-Assisted Suicide = PAS) was sent to a total of 4,533 student email addresses from the medical faculties in Umeå (1,286), Uppsala (1,203), Örebro (844), and Linköping (1,200). No exclusion criteria were applied for students who chose to respond to the questionnaire. The initial invitation was sent on 28 October 2024. Three reminder emails were subsequently sent (4 November 2024, 11 November 2024, and 1 January 2025) before data collection was completed on 4 February 2025.

The introductory patient vignette (see appendix) was designed to resemble, as closely as possible, an average patient requesting PAD based on statistics from the 2022 report of Oregon's Death with Dignity Act program (13). The questionnaire then consisted of four questions related to the patient case. The first asked which medical-ethical principle the students considered most important to follow in the given scenario. This was followed by questions regarding the medical students' attitudes toward PAD, their willingness to personally assist in assisted dying in the future as licensed physicians, and whether all physicians should be obligated to assist in PAD, assuming it were legal. After each of these four initial questions, space was provided for free-text responses. Questions 5–10 consisted of demographic and descriptive items (trust in the Swedish healthcare system, age, prior work experience, religious beliefs, semester of study, and University).

After data collection was completed, statistical analyses were conducted using the SPSS Statistics, version 31.0.0.0 (IBM Corp., Armonk, NY, USA). When calculating proportions, 95% confidence intervals (95% CI) were applied, under the assumption that non-overlapping 95% CIs correspond to a hypothesis test with a p -value < 0.05 . Qualitative thematic analysis was performed based on the responses in free text (14, 15).

Ethical considerations

While PAD is a polarising issue, the risk of psychological harm caused by the questionnaire distributed to the participating students was considered to be low. All collected data were anonymised and none of the individual questionnaire responses could be traced back to specific individuals. The survey anonymity was clearly communicated to the participants in the survey invitation, which also served as the informed consent form. By completing the questionnaire, participants were considered to have provided informed consent to participate in the study.

Since the questionnaire was anonymous, participants did not have the option to withdraw their responses once they had been submitted. Ethical approval was obtained from the Swedish Ethical Review Authority (reference number 2024-01901-01).

Results

Quantitative analysis

The questionnaire was sent to 9168 students, and a total of 2,107 responses were received (overall response rate 23%). Among respondents to the PAD version ($n = 1,099$), 57% supported legalisation, 22% opposed it, and 20% were undecided. Among respondents responding to the PAS version ($n = 1,008$), 56% supported legalisation, 25% opposed it, and 19% were undecided. No statistically significant difference was observed between the two questionnaire versions ($p = 0.54$).

Similarly, no statistically significant difference was observed between questionnaire versions regarding willingness to personally assist in PAD/PAS if legal ($p = 0.46$), nor regarding whether all physicians should be obligated to participate ($p = 0.31$). Given these findings, the results from both questionnaire versions are presented jointly, and the term PAD is used to refer collectively to responses from both questionnaires throughout the remainder of the results. Responses were evenly distributed between the two surveys. The results are presented in Tables 1, 2 and 3. In the total sample ($n = 2,107$), 57% of respondents supported legalisation of PAD, 23% opposed it, and 20% were undecided. Overall, 53% of students ($n = 2,107$) indicated that, as future licensed physicians, they could consider personally assisting in PAD if the practice were legal, while 24% were opposed and 23% were uncertain. In contrast, when asked whether all physicians should be obliged to participate if the practice were legal ($n = 2,107$), a clear majority (68%) rejected such an obligation. Only 19% supported mandatory participation, while 13% were undecided.

Table 1
– Support for legalization of PAD/PAS in the described case

Variable	Yes (%)	No (%)	Undecided (%)
Total	57 (55–59)	23 (22–25)	20 (18–22)
Questionnaire version (N = 2107)			
Physician-assisted dying (n = 1099)	57 (54–60)	22 (20–25)	20 (18–23)
Physician-assisted suicide (n = 1008)	56 (53–59)	25 (22–27)	19 (17–22)
Preferred ethical principle (n = 2029)			
Autonomy (n = 1055)	84 (81–86)	4 (3–6)	12 (10–14)
Non-maleficence (n = 230)	26 (20–32)	47 (40–54)	27 (21–33)
Beneficence (n = 511)	26 (22–30)	48 (44–53)	25 (21–29)
Justice (n = 233)	44 (38–51)	27 (21–33)	28 (23–34)
Age group (n = 2107)			
18–30 years (n = 1841)	57 (55–59)	23 (21–25)	20 (18–22)
≥ 31 years (n = 266)	57 (51–63)	26 (20–32)	17 (12–23)
Semester group (n = 2107)			
Early semesters (n = 1008)	58 (55–61)	22 (19–24)	20 (17–22)
Late semesters (n = 1099)	55 (52–58)	25 (22–27)	20 (17–22)
Religious belief (n = 1986)			
Religious (n = 534)	37 (33–42)	43 (39–47)	20 (16–23)
Non-religious (n = 1452)	64 (61–66)	16 (14–18)	20 (18–22)
Trust in Swedish healthcare (n = 2107)			
High trust (n = 1903)	57 (55–59)	23 (21–25)	20 (18–22)
Low trust (n = 204)	53 (46–59)	27 (20–33)	21 (15–26)
Previous healthcare work experience (n = 2107)			
Yes (n = 1563)	57 (54–59)	24 (21–26)	20 (18–22)
No (n = 544)	57 (53–62)	22 (19–26)	20 (17–24)

Note: Percentages are based on valid responses for each variable. Total N varies due to item-level missing data. 95% confidence intervals are presented in brackets.

Table 2
Willingness to personally assist in PAD/PAS if legal

Variable	Yes (%)	No (%)	Undecided (%)
Total (n = 2107)	53 (51–55)	24 (22–26)	23 (21–25)
Questionnaire version (n = 2107)			
Physician-assisted dying (n = 1099)	54 (51–57)	24 (22–27)	22 (20–24)
Physician-assisted suicide (n = 1008)	52 (49–55)	24 (22–27)	24 (22–27)
Preferred ethical principle (n = 2028)			
Autonomy (n = 1054)	70 (67–73)	9 (7–11)	21 (19–24)
Non-maleficence (n = 230)	31 (26–37)	44 (37–50)	25 (20–30)
Beneficence (n = 511)	34 (30–38)	44 (39–48)	23 (19–26)
Justice (n = 233)	46 (40–52)	24 (18–30)	30 (24–36)
Age group (n = 2107)			
18–30 years (n = 1840)	52 (50–55)	24 (22–26)	24 (22–26)
≥ 31 years (n = 266)	55 (49–61)	26 (20–31)	20 (15–24)
Semester group (n = 2107)			
Early semesters (n = 1007)	54 (51–57)	24 (22–27)	22 (19–24)
Late semesters (n = 1099)	51 (49–54)	24 (22–27)	24 (22–27)
Religious belief (n = 1985)			
Religious (n = 534)	31 (27–35)	46 (42–50)	23 (19–26)
Non-religious (n = 1451)	61 (58–63)	16 (14–18)	23 (21–26)
Trust in Swedish healthcare (n = 2106)			
High trust (n = 1902)	53 (51–56)	23 (21–25)	23 (21–25)
Low trust (n = 204)	46 (39–53)	32 (25–38)	22 (17–27)
Previous healthcare work experience (n = 2107)			
Yes (n = 1562)	52 (49–54)	24 (22–26)	24 (22–26)
No (n = 544)	55 (51–60)	24 (21–28)	21 (17–24)
Note: Percentages are based on valid responses for each variable. Total N varies due to item-level missing data. 95% confidence intervals are presented in brackets.			

Table 3
Support for mandatory physician participation in PAD/PAS if legal

Variable	Yes (%)	No (%)	Undecided (%)
Total (n = 2107)	19 (18–21)	68 (66–70)	13 (12–15)
Questionnaire version (n = 2107)			
Physician-assisted dying (n = 1099)	20 (18–23)	66 (64–69)	13 (11–15)
Physician-assisted suicide (n = 1008)	18 (15–20)	69 (66–72)	13 (11–15)
Preferred ethical principle (n = 2028)			
Autonomy (n = 1055)	22 (20–25)	61 (58–64)	16 (14–19)
Non-maleficence (n = 230)	20 (14–25)	73 (67–79)	7 (4–10)
Beneficence (n = 511)	14 (11–17)	76 (72–80)	10 (7–12)
Justice (n = 233)	18 (14–24)	69 (63–75)	13 (9–17)
Age group (n = 2107)			
18–30 years (n = 1841)	20 (18–22)	67 (65–69)	13 (12–15)
≥ 31 years (n = 266)	16 (12–21)	72 (67–77)	12 (8–16)
Semester group (n = 2107)			
Early semesters (n = 1008)	21 (18–23)	65 (62–68)	14 (12–16)
Late semesters (n = 1099)	18 (15–20)	70 (67–73)	12 (10–14)
Religious belief (n = 1985)			
Religious (n = 534)	12 (9–15)	80 (76–83)	8 (6–11)
Non-religious (n = 1452)	22 (20–24)	63 (61–66)	15 (13–17)
Trust in Swedish healthcare (n = 2106)			
High trust (n = 1903)	20 (18–21)	67 (65–69)	14 (12–15)
Low trust (n = 204)	16 (11–22)	75 (69–80)	9 (5–13)
Previous healthcare work experience (n = 2107)			
Yes (n = 1563)	18 (17–20)	69 (67–71)	13 (11–14)
No (n = 544)	21 (18–25)	64 (60–68)	15 (12–17)
Note: Percentages are based on valid responses for each variable. Total N varies due to item-level missing data. 95% confidence intervals are presented in brackets.			

When asked which medical-ethical principle carried the greatest weight in the described case (N = 2,107), half of the respondents (50%) selected autonomy. Beneficence was chosen by 24%, followed by justice (11%) and non-maleficence (11%). A minority (4%) indicated that none of the listed principles was more important. A statistically significant association was observed between the medical-ethical principle prioritised in the scenario and attitudes toward the legalisation of PAD ($p < .001$). Support for legalisation was most prevalent among students who prioritised autonomy (84%), whereas opposition was more common among those prioritising non-maleficence (48%) and beneficence (48%). Students prioritising non-maleficence also more frequently reported uncertainty (27%) compared with those prioritising autonomy (12%). A significant association was also identified between prioritised ethical principle and willingness to personally assist in PAD if legalised ($p < .001$). Willingness to assist was most common among students prioritising autonomy (70%), whereas substantially lower levels of willingness was observed among those prioritising non-maleficence (31%) and beneficence (34%).

An association was found between prioritised ethical principle and views regarding whether all physicians should be obliged to participate if PAD were legal ($p < .001$). Across all prioritised principles, a majority expressed opposition to mandatory participation. However, comparatively higher levels of support for mandatory participation were observed among students prioritising autonomy (22%) than among those prioritising beneficence (14%) or non-maleficence (20%).

An association between religious belief and the medical-ethical principle prioritised in the patient scenario was observed ($p < .001$). Among non-religious students, autonomy was most frequently prioritised (57%), whereas this proportion was substantially lower among religious students (38%). In contrast, religious students more often prioritised beneficence (33% vs. 22.0%) and non-maleficence (19% vs. 9%) compared with non-

religious students. Religious belief was also significantly associated with attitudes toward PAD ($p < .001$). Support for legalisation was markedly higher among non-religious students (64%) than among religious students (37%), whereas opposition was more common among religious students (43% vs. 16%). Furthermore, an association was identified between religious belief and willingness to personally assist in PAD ($p < .001$). Willingness to assist was reported by 61% of non-religious students compared with 31% of religious students, while opposition was more prevalent among religious students (46% vs. 16%). Finally, religious belief was associated with views on whether all physicians should be obliged to participate if PAD were legal ($p < .001$). Religious students more frequently opposed mandatory participation (80% vs. 63%), whereas support for such an obligation was more common among non-religious students (22% vs. 12%).

The majority of respondents were aged 18–30 years (87%). A majority also reported high or very high trust in the Swedish healthcare system (90%). 78% reported previous work experience in the healthcare system. No associations were observed between age group or previous healthcare work experience and any of the study outcomes (all χ^2 tests, $p > .05$). Similarly, no association were identified between trust in the healthcare system and attitudes toward legalisation, views on mandatory participation, or ethical prioritisation (all $p > .05$).

Qualitative analysis

The qualitative thematic analysis was based on written responses in the free-text sections of the questionnaires. Five main themes were identified based on these responses: Fundamental values and principles; Who should perform PAD; Conditions for the introduction of PAD, Patient characteristics, and Challenges. In addition to these, there were some reactions to the either value-laden or vague terminology used in the two different questionnaires. Some participants reacted towards the term “physician-assisted dying” as misleading or euphemistic, while others suggested that the use of the word “suicide” would negatively influence how respondents evaluated the practice.

Fundamental values and principles

The students identified several fundamental values and ethical principles that are of importance when considering the legalisation of PAD. These values or principles were invoked to either defend or reject PAD, depending on the student’s ethical interpretation.

Respect for patient autonomy was, among some students, closely linked to notions of personal agency and control over one’s own body and life, including the option to choose the timing and manner of death including PAD. From this perspective, refusing to assist a patient (to die) who no longer wished to live was characterised as cruel. In some responses, the patient’s perspective was assigned greater ethical weight than considerations related to physician well-being or conscientious objection. *Equal access to healthcare*, including assisted dying, was described by some respondents as a core value.

Some students who argued against PAD viewed it as conflicting with the *principle of avoiding harm*, interpreting the act of causing death itself as a form of harm. By contrast, students who expressed support for PAD argued that it could serve to avoid harm by alleviating prolonged suffering and sparing patients from languishing toward death.

A subset of responses emphasised a beneficent attitude of providing *quality of life and well-being*. From this perspective, life was not viewed as something to be preserved solely for its own sake. PAD was further described as potentially providing a sense of security as a last resort, which in itself was considered capable of enhancing well-being.

Contrary to this, the *preservation of life* was regarded as a primary and intrinsic value by other participants, leading them to the view that contributing to the shortening of life is incompatible with the professional role of the physician. From this perspective, physicians were understood to have a duty to cure, relieve suffering, and provide comfort, while assisting in the active ending of life was viewed as incompatible with acting in the patient’s best interests. In line with this view, several respondents stressed the importance of identifying alternatives to PAD. Adequate palliative care, including palliative sedation, was described as a preferable means of alleviating suffering. Some also expressed a commitment to helping patients find value and meaning in life, with the aim of reducing the desire to die.

Who should perform PAD

Respondents expressed divergent views regarding whether PAD should be part of public healthcare and of the physician’s professional role: Some argued that it should not involve public healthcare at all, or that it should not be the responsibility of physicians but rather of another profession or institution. A few indicated that they would consider changing profession or country if PAD were legalised, as they did not wish to be involved under any circumstances.

Table 4
Response rate by faculty and questionnaire version

Faculty	Questionnaire version	Invitations sent	Responses	Response rate (%)
Karolinska Institutet	Physician-assisted dying	1,680	369	22.0
Lund University	Physician-assisted dying	1,391	415	29.8
University of Gothenburg	Physician-assisted dying	1,564	311	19.9
Other faculties*	Physician-assisted dying	–	4	–
Total (Physician-assisted dying)		4,635	1,099	23.7
Umeå University	Physician-assisted suicide	1,286	321	25.0
Uppsala University	Physician-assisted suicide	1,203	244	20.3
Örebro University	Physician-assisted suicide	844	159	18.8
Linköping University	Physician-assisted suicide	1,200	276	23.0
Other faculties*	Physician-assisted suicide	–	8	–
Total (Physician-assisted suicide)		4,533	1,008	22.2
Overall total		9,168	2,107	23.0
*“Other faculties” refers to participants who indicated a different university than the one to which their questionnaire version was originally distributed (4 in the physician-assisted dying version and 8 in the physician-assisted suicide version), corresponding to approximately 0.5% of the total sample.				

Others maintained that PAD could be acceptable if it were restricted to specific physicians with particular training and authorisation. Suggestions included limiting PAD to certain specialties, such as palliative medicine, psychiatry, geriatrics, or oncology, and performing it only within designated hospital units.

Views also differed regarding conscientious objection. Some respondents stressed that no physician should be compelled to participate in PAD and that the right to object should be explicitly regulated, for example through employment contracts. In contrast, others argued that once PAD is legalised and incorporated into the physician's ethical framework, refusal should not be permitted, or that physicians should at least be required to refer patients to a colleague who provides PAD. Across these positions, some respondents emphasised that the physician involved in PAD should have an established relationship with the patient and a thorough understanding of the patient's situation.

Conditions for the introduction of PAD

Respondents expressed differing views on whether PAD should be legalised in Sweden. Among those who considered legalisation conceivable, many stressed that any such reform would need to be accompanied by strict regulation, clear eligibility criteria, and robust procedural safeguards to minimise the risk of error. PAD was widely described as something that should not be easily accessible and for which the threshold should be high.

Several respondents emphasised the importance of thorough assessments prior to granting PAD, including psychiatric, psychological, and psychosocial evaluations, as well as sustained dialogue with the patient and sufficient time for reflection. Some also noted that the patient's family should be given an opportunity to express their views. Physicians were described as having a central role in the decision-making process and needing to be confident in their decisions. Some argued that the question of PAD is not primarily medical, but rather political, legislative, and democratic.

Patient characteristics

Eligibility for PAD was described as contingent on severe, medically caused suffering in the context of a chronic, incurable, and life-limiting conditions. PAD was commonly framed as appropriate only at the end of life and as a last resort, after all other reasonable options had been exhausted. Some restricted eligibility to cases involving very low levels of physical functioning. Other respondents explicitly rejected PAD for patients with psychiatric conditions alone. Eligibility was also described as dependent on patient autonomy and decisional capacity. It was considered essential to ensure that patients were not acting under pressure or perceiving themselves as a burden to others, and that depression or cognitive impairment were ruled out.

Challenges

Respondents identified a wide range of potential challenges associated with the legalisation of PAD. A frequently raised concern was the risk of a “slippery slope,” including the gradual widening of indications and shifts in societal values over time. Some feared that PAD could be misused in contexts characterised by authoritarian governance or economic pressure, and that legalisation might confer physicians with excessive power over life and death. In this context, respondents expressed concern that physicians could come to “play God” or even end the lives of patients who do not wish to die.

Several respondents highlighted risks related to social pressure and vulnerability. Increased accessibility to PAD was described as potentially leading individuals to request assistance because they perceived themselves as a burden to others. Concerns were raised that this could undermine respect for the intrinsic value of human life, particularly affecting older persons, individuals with disabilities, and those living with long-term illness. PAD was by some described as foreign or alien to prevailing moral intuitions.

Potential harms to others were also emphasised. Respondents described PAD as placing physicians and families in ethically and emotionally demanding situations. Physicians were portrayed as facing significant psychological strain and moral distress due to the responsibility involved in assisting in death. Several respondents characterised participation in PAD as emotionally burdensome, distressing, or incompatible with their conscience, while a few also mentioned the risk of conflict or pressure from patients’ relatives.

Some respondents equated PAD with killing or murder and viewed it as fundamentally incompatible with medical ethics. Related concerns included the medicalisation of death and the risk of irreversible mistakes, particularly in situations characterised by uncertainty, grey areas, or hastily made decisions. For these reasons, some respondents argued that PAD should not be permitted at all.

Concerns were also raised regarding fairness and professional consequences. Respondents noted that if only some physicians were involved in PAD, this could lead to stigmatisation or an unequal distribution of responsibility. At the same time, widespread avoidance of PAD could place a disproportionate burden on those willing to participate and potentially weaken incentives to further develop palliative care. Finally, some respondents feared that legalisation could erode trust in healthcare and negatively affect families, professional relationships, and society more broadly.

Discussion

In view of the changing attitudes towards PAD both in the general population and among healthcare professionals, it is important to explore the views on medical students, who will be future physicians. In this study, a majority of responding medical students believed that PAD should be legalised. The findings suggest that Swedish medical students hold more positive attitudes toward PAD than reported in the most recent Swedish study by Karlsson et al (9), although differences should be interpreted with caution due to differences in questionnaire design, sample size, and response rates. Despite these limitations, the present study provides valuable contemporary data on Swedish medical students’ views on PAD. The participants’ attitudes appear less permissive than in countries where PAS is legalised, but at the same time more permissive than in most other countries where it remains prohibited (8).

The question has been raised in public discourse whether value-laden terminology might steer the responses to questionnaires regarding PAD, affecting the objectivity of the results. The present study, however, found no significant differences in results between the two questionnaire versions, despite the use of different terms to describe PAD, of which one was more value-laden than the other. The study therefore does not support our initial hypothesis that individual value-laden terminology on its own has an immediate effect on medical students’ attitudes toward PAD in this context.

Despite the absence of significant differences between questionnaire versions in the quantitative analysis, some respondents explicitly reflected on the use of value-laden terminology. Critiques of terms such as “physician-assisted dying” as euphemistic, and considerations of the negative framing effects of the word “suicide,” indicate that some medical students recognise the potential of language to shape ethical judgment. This suggests that even where wording does not produce measurable differences in stated attitudes, it may nonetheless retain ethical and conceptual significance.

A key finding of the present study was that the preferred medical-ethical principles were significantly associated with attitudes toward PAD and that a majority of students who prioritised the principle of autonomy were more positive toward PAD in terms of both legalisation and willingness to personally assist. In contrast, students who prioritised the principle of non-maleficence or of beneficence were more often negative or uncertain. These results are of interest in light of a general shift in attitudes within both Swedish society and healthcare at large, where more person-centred care is advocated and greater decision-making authority is shifted to the patient as an individual, moving away from the traditionally more paternalistic model of healthcare.

Furthermore, students who identified as religious were significantly less likely to prioritise autonomy and more likely to emphasise non-maleficence or beneficence, whereas the opposite pattern was observed among non-religious students. Religious belief was also associated with more restrictive attitudes toward PAD, with religious students consistently less positive regarding its legalisation, their willingness to assist, and whether physicians should be obliged to participate. These findings are consistent with previous international research demonstrating the influence of

religion on both public debate (16) and students' attitudes toward PAD (17). Major world religions generally reject PAD, instead emphasising palliative care and spiritual support (18). Given so, it is not surprising that students with religious beliefs expressed more negative attitudes towards PAD. Notably, no explicit references to religious belief were identified in the qualitative analysis. This is in line with a previous qualitative study among physicians from Quebec which found that most conscientious objectors did not cite moral or religious grounds as primary reason for refusal of PAD; rather, the emotional burden and fear of psychological repercussions were most commonly expressed (19). Our results suggest that religious beliefs still might work as an ethical framework indirectly influencing reasoning regarding PAD for Swedish medical students.

The absence of explicit religious arguments may reflect the strong emphasis on professional neutrality and the separation of personal beliefs from clinical reasoning within Swedish medical education and healthcare practice. It may also indicate that religious beliefs function as internalised frameworks that are not always consciously articulated in ethical reasoning. Further research examining the role of faith in ethical decision-making in PAD would be valuable. Respect for autonomy also emerged as the ethical principle most consistently associated with arguments in favour of PAD in the quantitative analysis. This observation accords with previous literature on PAD (20, 21). By contrast, the remaining principles - non-maleficence, beneficence, and justice - were applied in more flexible and context-dependent ways, underscoring the interpretive complexity involved in applying abstract ethical principles to end-of-life decision-making. When invoked in opposition to PAD, arguments grounded in beneficence and non-maleficence frequently overlapped with more paternalistic understandings of professional responsibility. Similarly, previous research has identified associations between authoritarian personality traits and negative attitudes towards PAD in the general population (22, 23).

Views opposing PAD were often accompanied by an emphasis on alternative approaches, such as high-quality palliative care, palliative sedation, and psychosocial support. Whether meaningful moral distinctions exist between palliative sedation and PAD in end-of-life situations continues to be debated in the medical ethics literature (24, 25). Regardless of whether meaningful moral distinctions can be drawn between the two practices, recent research from Canada suggests that the legalisation of PAD has had a substantial impact on palliative care providers and their clinical practice (26). These findings highlight the importance of a multidisciplinary implementation process involving palliative medicine practitioners, should PAD be legalised in Sweden. Such a process may, however, present challenges, as physicians specialising in palliative medicine have been shown to be more likely to oppose PAD (5).

The most recent Swedish study among medical students highlighted the need for improved education in symptom control and quality of life in palliative care (9). In recent years, such education has increased within Swedish medical programmes, prompting examination of whether this has influenced students' attitudes toward PAD. The findings in the present study suggest that palliative care remains widely regarded as an adequate alternative to PAD, while increased knowledge alone does not appear to result in more restrictive attitudes.

Students' emphasis on strict regulation, high thresholds, and thorough assessment underscores the need for a model that is well suited to the Swedish health care model particularly regarding risks of disproportionately affecting vulnerable groups and undermining trust in healthcare. However, previous studies do not suggest that vulnerable or disadvantaged groups are overrepresented among those who undergo PAD in countries where it has been legalised; rather, the evidence indicates an association between higher socioeconomic status and increased use of PAD (27).

Previous studies suggest that medical students' attitudes towards end-of-life decisions may evolve during medical training, with more clinically advanced students generally expressing greater support (8). However, this pattern was not observed in the present study, as no significant differences were found between early and late semesters of the medical program. Similarly, no associations were found between attitudes toward PAD and trust in the Swedish healthcare system or prior experience in healthcare or social care, suggesting that these factors did not have a decisive impact on students' positions in this cohort.

The question of who should perform PAD further highlighted ambivalence regarding professional roles and responsibilities. This is to be expected and reflects the diversity of regulatory models in jurisdictions where PAD is permitted. In the international debate, it has been proposed that PAD should not constitute a core responsibility of the medical profession, alongside protections for healthcare professionals' right to opt out (28). This is consistent with the present study's findings, in which a majority of medical students rejected an obligation for all physicians to participate, should PAD be legalised. This is notable given that conscientious objection is not recognised in other ethically contested areas of the Swedish healthcare system (29); its introduction would therefore represent a significant shift in established professional norms and the organisation of care. This underscores the need for a comprehensive debate on the ethical, professional, and institutional implications extending beyond PAD itself, including its potential to fundamentally reshape the organisation of Swedish healthcare, prior to any future legalisation.

This study has some noteworthy limitations. The response rate was modest at 23%, which may limit the generalisability or transferability of the findings and increase the risk of selection bias, as students with stronger opinions regarding PAD may have been more likely to participate. The response rate was lower than that reported in the previous Swedish study among medical students, which had a response rate of 44% but included a smaller sample of first- and fifth-year students (9). However, a recent systematic review by Grundnig et al. showed that there is substantial variation in response rates across studies of medical students' attitudes towards end-of-life decisions, with several contemporary online or mail-based surveys reporting response rates in a similar or lower range (8). Thus, while the response rate should be interpreted as a limitation, it is not unusual within this field of survey research.

Another limitation is that the cross-sectional design captures attitudes only at a single point in time and cannot determine whether the observed associations reflect enduring attitudes or temporary contextual influences. Students' attitudes towards PAD are likely influenced by broader societal developments, including public debate, international legislative changes, media coverage, and social media discourse, factors that were beyond the scope of the present study. To what extent such influences lead individual medical students to change their opinions over time remains unknown, as no previous longitudinal cohort studies have examined this, to our knowledge.

Conclusions

In summary, this study provides an indication that a majority of Swedish medical students hold positive attitudes toward physician-assisted suicide, reflecting a potential shift compared with previous studies. The qualitative analysis indicated that the student's views were highly polarised, since respondents expressed strongly argued positions both for and against PAD respectively. The value-laden terminology did not significantly alter responses. However, the study clearly highlights the importance of ethical frameworks and religious belief in shaping medical students' attitudes toward physician-assisted suicide. Overall, the study contributes new knowledge about how future physicians relate to this complex medical-ethical issue, which is considered highly relevant even beyond the boundaries of the medical profession.

Abbreviations

PAD
physician-assisted dying
PAS
physician-assisted suicide

Declarations

Ethics approval and consent to participate

Ethical approval was granted by the Swedish Ethical Review Authority (Dnr 2024-01901-01). Informed consent to participate in the study was obtained from all participants. This study involved no experiments. It was performed in accordance with relevant guidelines and regulations.

Consent for publication

Not applicable.

Availability of data and materials

Due to ethical and legal constraints, the dataset generated and analysed during the current study is not publicly available. Data access may be granted upon reasonable request and in accordance with applicable regulations. Requests should be submitted to registrator@lu.se. The questionnaires used in this study are included in the supplementary materials.

Competing interests

The authors declared no potential conflicts of interest with respect to the research, authorship, or publication of the article.

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Authors' contributions

A.N. took part in the planning of the study and the formulation of the questionnaires. A.N. assembled the e-mail addresses from students to distribute the questionnaires and analysed the data statistically. A.N. also wrote the first draft of the manuscript and participated in the subsequent revisions. A.N. prepared the four tables presented in the manuscript.

S.P. took part in the planning of the study and the formulation of the questionnaires. S.P. also contributed to the analysis and interpretation of data and writing the manuscript.

J.L. took part in the planning of the study and the formulation of the questionnaires. J.L. also performed the thematic analysis of the responses in free text. J.L. contributed to the statistical analysis and interpretation of results, and writing the manuscript.

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References

1. Swedish National Council on Medical Ethics (SMER). Assisted dying - A state of knowledge report (2017:2). <https://smer.se/wp-content/uploads/2017/11/Smer-2017.2-Assisted-dying.pdf> Accessed 12th June 2026.
2. Regnard C, Worthington A, Finlay I. Oregon Death with Dignity Act access: 25 year analysis. *BMJ Support Palliat Care*. 2024;14(4):455–61. 10.1136/spcare-2023-004292.
3. Andersson F, Öhberg P. Det finns en sjö och sedan aldrig mer – medborgares och politikernas inställning till att tillåta aktiv dödshjälp. (There Is a Lake, and Then Never Again: Citizens' and Politicians' Attitudes Toward Allowing Active Euthanasia) In: Andersson U, Oscarsson H, Rönnerstrand B, Theorin N, editors. *Du sköra nya värld*. Göteborg: SOM-institutet, Göteborgs universitet; 2022. pp. 89–100. <https://www.gu.se/sites/default/files/2022-06/089-100%20Andersson%20o%20C3%96hberg.pdf>. Accessed 9 Jun 2026.
4. Novus. Ny opinionsundersökning om assisterat döende i Sverige. 2025. (New Public Opinion Survey on Assisted Dying in Sweden, 2025), 2025. <https://rtvd.se/wp-content/uploads/2026/03/Novusrapport-2025-RTVD-Assisterat-doende-ny.pdf>. Accessed 9 Jun 2026.
5. Lynøe N, Lindblad A, Engström I, Sandlund M, Juth N. Trends in Swedish physicians' attitudes towards physician-assisted suicide: a cross-sectional study. *BMC Med Ethics*. 2021;22(1):86. 10.1186/s12910-021-00652-0.
6. Lindblad A, Juth N, Engström I, Sandlund M, Lynøe N. Assisted dying in Swedish healthcare: a qualitative analysis of physicians' reasoning about physician-assisted suicide. *Monash Bioeth Rev*. 2024;42(1):99–114. 10.1007/s40592-024-00202-5.
7. Lindblad A, Löfmark R, Lynøe N. Physician-assisted suicide: a survey of attitudes among Swedish physicians. *Scand J Public Health*. 2008;36(7):720–7. 10.1177/1403494808090163.
8. Grundnig JS, Roehe MA, Trost C, Anvari-Pirsch A, Holzinger A. Attitudes of undergraduate medical students towards end-of-life decisions: a systematic review of influencing factors. *BMC Med Educ*. 2025;25(1):642. 10.1186/s12909-025-07077-y.
9. Karlsson M, Strang P, Milberg A. Attitudes toward euthanasia among Swedish medical students. *Palliat Med*. 2007;21(7):615–22. 10.1177/0269216307081940.
10. Sillitti P, Meier C, Blanc S, Jones L, Gamondi C. A public health perspective on assisted dying and its different modalities. *Lancet Public Health*. 2025;10(11):e1001–5. 10.1016/S2468-2667(25)00245-2.
11. Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap)—a metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inf*. 2009;42(2):377–81. 10.1016/j.jbi.2008.08.010.
12. Harris PA, Taylor R, Minor BL, Elliott V, Fernandez M, O'Neal L, McLeod L, Delacqua G, Delacqua F, Kirby J, Duda SN, REDCap Consortium. The REDCap consortium: Building an international community of software platform partners. *J Biomed Inf*. 2019;95:103208. 10.1016/j.jbi.2019.103208.
13. Oregon Health Authority. Oregon Death with Dignity Act Data Summary 2022. 2023. <https://www.oregon.gov/oha/PH/PROVIDERPARTNERRESOURCES/EVALUATIONRESEARCH/DEATHWITHDIGNITYACT/Documents/year25.pdf>. Accessed 9 Jun 2026.
14. Ahmed SK, Mohammed RA, Nashwan AJ, Ibrahim RH, Abdalla AQ, Ameen M. Using thematic analysis in qualitative research. *J Med Surg Public Health*. 2025;6:100198.
15. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Res Psychol*. 2006;3(2):77–101.
16. Stempsey WE. The role of religion in the debate about physician-assisted dying. *Med Health Care Philos*. 2010;13(4):383–7. 10.1007/s11019-010-9267-y.
17. Shahid M, Shafiq AN, Aslam H, Ayub N. Attitude of undergraduate medical students towards euthanasia and physician-assisted suicide: A cross-sectional study. *J Pak Med Assoc*. 2024;74(5):1022–5. 10.47391/JPMA.10112.

18. Tomkins A, Duff J, Fitzgibbon A, Karam A, Mills EJ, Munnings K, Smith S, Seshadri SR, Steinberg A, Vitillo R, Yugi P. Controversies in faith and health care. *Lancet*. 2015;386(10005):1776–85. 10.1016/S0140-6736(15)60252-5.
19. Bouthillier ME, Opatrny L. A qualitative study of physicians' conscientious objections to medical aid in dying. *Palliat Med*. 2019;33(9):1212–20. 10.1177/0269216319861921.
20. Rosenberg LJ, Butler JM, Caprio AJ, Rhodes RL, Braun UK, Vitale CA, Telonidis J, Periyakoil VS, Farrell TW. Results From a Survey of American Geriatrics Society Members' Views on Physician-Assisted Suicide. *J Am Geriatr Soc*. 2020;68(1):23–30. 10.1111/jgs.16245.
21. Fontalis A, Prousalis E, Kulkarni K. Euthanasia and assisted dying: what is the current position and what are the key arguments informing the debate? *J R Soc Med*. 2018;111(11):407–13. 10.1177/0141076818803452.
22. Borovecki A, Curkovic M, Nikodem K, Oreskovic S, Novak M, Rubic F, Vukovic J, Spoljar D, Gordijn B, Gastmans C. Attitudes about withholding or withdrawing life-prolonging treatment, euthanasia, assisted suicide, and physician assisted suicide: a cross-sectional survey among the general public in Croatia. *BMC Med Ethics*. 2022;23(1):13. 10.1186/s12910-022-00751-6.
23. Stolz E, Burkert N, Großschädl F, Rásky É, Stronegger WJ, Freidl W. Determinants of Public Attitudes towards Euthanasia in Adults and Physician-Assisted Death in Neonates in Austria: A National Survey. *PLoS ONE*. 2015;10(4):e0124320. 10.1371/journal.pone.0124320.
24. Juth N, Lindblad A, Lynöe N, Sjöstrand M, Helgesson G. Moral differences in deep continuous palliative sedation and euthanasia. *BMJ Support Palliat Care*. 2013;3(2):203–6. 10.1136/bmjspcare-2012-000431.
25. Sjöstrand M, Helgesson G, Eriksson S, Juth N. Autonomy-based arguments against physician-assisted suicide and euthanasia: a critique. *Med Health Care Philos*. 2013;16(2):225–30. 10.1007/s11019-011-9365-5.
26. Mathews JJ, Hausner D, Avery J, Hannon B, Zimmermann C, Al-Awamer A. Impact of Medical Assistance in Dying on palliative care: A qualitative study. *Palliat Med*. 2021;35(2):447–54. 10.1177/0269216320968517.
27. Redelmeier DA, Ng K, Thiruchelvam D, Shafir E. Association of socioeconomic status with medical assistance in dying: a case-control analysis. *BMJ Open*. 2021;11(5):e043547. 10.1136/bmjopen-2020-043547.
28. Twycross R. Assisted dying: principles, possibilities, and practicalities. An English physician's perspective. *BMC Palliat Care*. 2024;23(1):99. 10.1186/s12904-024-01422-6.
29. Munthe C. Conscientious refusal in healthcare: the Swedish solution. *J Med Ethics*. 2017;43(4):257–9. 10.1136/medethics-2016-103752.

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