Attitude of undergraduate medical students towards euthanasia and physician-assisted suicide: A cross-sectional study
Mahnoor1, Aiza Noor Shahid2, Haleema Shafiq3, Noman Aslam4, Ayesha Ayub5

Abstract
Euthanasia is categorically prohibited in Pakistan by Islamic law, but a clash of opinions among doctors and human rights advocates still prevails. As a result, medical students are becoming concerned about its practice and this problem needs to be addressed. A cross-sectional study was conducted at Faisalabad Medical University (FMU), Pakistan, from April 2023 to May 2023, using random sampling and statistical programme SPSS version 25, to assess the attitudes of medical students regarding euthanasia and physician-assisted suicide (PAS).

Despite the conditions and scenarios presented to the students, most of them expressed opposition to euthanasia and physician-assisted suicide because of their religious beliefs and optimistic approach to life. Most of them favoured palliative care and passive euthanasia.

Some students showed compliance with euthanasia even though it is equivalent to murder in Islam. Such contrasting results can baffle a physician to make wise decisions. Hence, it must be covered in medical curriculum in depth to help the future physicians clearly understand its practice under all circumstances.

Keywords: Euthanasia, physician-assisted dying, medical students, attitude, palliative care.

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Introduction
Death, an indebatable fact, not always ringing in tranquilly to conclude life. Sometimes when disease is devouring the person alive, an easy death seems to be the only relief to one's agony. Francis Bacon has modernised this concept by using the term “euthanasia”, considering it as one of the responsibilities of the doctor to ensure peaceful death of his patient.1

Euthanasia has a long history; it is sourced from the ancient historian Suetonius. Down the road, it appeared in different forms in Greece and Rome.2 A tug for its legalisation shifted from one area to another but never subsided. It is currently allowed in Netherlands, Holland, Belgium, Luxembourg, Albania, Columbia, and Canada. In 2021, New Zealand joined the list of nations that permit euthanasia. Euthanasia is categorically prohibited in Pakistan by Islamic law, but a clash of opinions between doctors and human rights advocates still prevails about its legalisation. This polarity of opinions demands that it should be narrated in clearly defined and wholly accepted terms. Research has been done in many countries of the West and Asia gauging the scope of this problem and sorting it out. Unfortunately, Pakistan is an exception. This ethically relevant topic is not well addressed in the medical community, especially among students. Until now, only a few studies have been conducted. That is why a study on the attitudes of undergraduate medical students was conducted to bridge this literary gap. The information from this study can be used to assess future doctors' attitudes toward euthanasia and can assist with forthcoming efforts to collaborate on legal and medical practices. Ultimately, it can help medical expertise to improve human health by taking wise decisions.

Methods and Results
This quantitative, cross-sectional, descriptive study was conducted from April to May 2023 and comprised undergraduate medical students at Faisalabad Medical University, Faisalabad. Students from domains other than FMU were excluded. Sample size of 316 students was calculated using the standard Cochran’s formula for calculating the sample size.

The population proportion was taken as 50% (0.5). The margin of error was taken at 5% with a 95% confidence interval.

After ethical approval, data was collected using the NOBAS (Norwegian Bioethics Attitude Survey) Questionnaire.3 Permission was taken from the original author to use the questionnaire. Consent from all participants was obtained before collection of data.
toward euthanasia. All participants were between the ages of 17 and 26; however, no age relevant variation was observed, \( p=0.1796 \) which is insignificant.

Despite the conditions and scenarios presented to the students, most of them expressed opposition to euthanasia and physician-assisted suicide. From conditions like terminal illness to chronic illness to mental disorders to simply wanting to die, students’ disapproval of euthanasia and PAS increased. On the other hand, students supported palliative care and passive euthanasia and believed that legalising euthanasia and PAS could result in abuse. Percentages of responses under different inquired conditions are summarised in Table-2.

The morality of euthanasia is a sensitive topic in medical community. In this study, 66% of students opposed euthanasia, which is consistent with results obtained in studies conducted at other medical universities in Pakistan.\(^5\) This trend was also seen in a study conducted in Hong Kong,\(^6\) although a contrast was seen in India\(^7\) where acceptance of euthanasia was 61%.

Religion is identified as an important factor in shaping the attitude of students towards euthanasia; it is similar to a study by Shane Sharp\(^8\) who reviewed literature to conclude that opposition towards euthanasia is linked to spirituality. Some students were less inclined towards religion, showed willingness for euthanasia and displayed freedom of the right to choose one’s own path of life or death. Legalisation regarding euthanasia in the Western world exemplifies the loss of religion as a foundation for moral ideas and beliefs. Pakistan, being an Islamic state, prohibits euthanasia. Muslims believe that only Allah has the authority to terminate life; a person cannot choose to die.

Furthermore, students responded that legalising euthanasia could undermine the role of the doctor as healer. It may result in the mistreatment of patients including terminally sick, mentally retarded, disabled, and the old. When the Dutch government permitted the killing

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**Table-1:** Demographic distribution with reference to gender, religion and year of MBBS and percentage response for euthanasia and PAS \( \text{(n=316).} \)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Disagree [%]</th>
<th>Agree [%]</th>
<th>Confused [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Euthanasia</td>
<td>PAS</td>
<td>PAS</td>
</tr>
</tbody>
</table>

Data was analysed using SPSS version 25.\(^4\) Frequencies and percentages were calculated for different categorical variables. Crosstabs between variables were made. Also, two-tailed \( p \)-values were calculated by using chi-square value for Question 1 and \( p<0.005 \) was considered significant.

**Table-2:** Comparison of responses under different conditions.

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Disagree</th>
<th>Agree</th>
<th>Confused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminal Illness with short life expectancy for:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• PAS</td>
<td>228(72.15%)</td>
<td>68(21.52%)</td>
<td>20(6.33%)</td>
</tr>
<tr>
<td>• Euthanasia</td>
<td>212(67.08%)</td>
<td>62(19.62%)</td>
<td>42(13.29%)</td>
</tr>
<tr>
<td>Active Euthanasia for chronic illness</td>
<td>221(69.93%)</td>
<td>57(18.03%)</td>
<td>38(12.02%)</td>
</tr>
<tr>
<td>PAS for mental illness</td>
<td>250(79.11%)</td>
<td>41(12.97%)</td>
<td>25(7.90%)</td>
</tr>
<tr>
<td>PAS for those who are tired of life and want to die</td>
<td>277(87.65%)</td>
<td>21(6.64%)</td>
<td>18(5.59%)</td>
</tr>
<tr>
<td>Legalization of PAS results in weak groups to experience pressure</td>
<td>107(33.86%)</td>
<td>147(46.51%)</td>
<td>62(19.62%)</td>
</tr>
<tr>
<td>Preference of palliative care over Euthanasia</td>
<td>68(21.51%)</td>
<td>205(64.87%)</td>
<td>43(13.60%)</td>
</tr>
<tr>
<td>Treatment limitation</td>
<td>106(33.54%)</td>
<td>136(43.03%)</td>
<td>74(23.41%)</td>
</tr>
</tbody>
</table>

| Use of reservation right on legalisation of: |          |       |          |
| • PAS                                   | 199(62.97\%) | 76(24.05\%) | 41(12.97\%) |
| • Euthanasia                            | 194(61.39\%) | 78(24.68\%) | 44(13.92\%) |

| Discussion with nurses where people want for: |          |       |          |
| • PAS                                   | 141(44.62\%) | 94(29.74\%) | 81(25.63\%) |
| • Euthanasia                            | 140(43.30\%) | 100(31.64\%) | 76(24.05\%) |

| Discussion with physician where people want for: |          |       |          |
| • PAS                                   | 118(37.34\%) | 129(40.82\%) | 69(21.83\%) |
| • Euthanasia                            | 113(35.75\%) | 127(40.18\%) | 76(24.05\%) |

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**Note:**

1. PAS: Physician-assisted suicide

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of people with dementia, it demonstrated the "slippery slope" phenomenon and "abuse of legalisation". In spite of this, an unexpectedly high number of students advocated euthanasia, regardless of whether the person had a chronic condition.

Gender is also identified as a variable that affects attitude towards euthanasia. Male students showed positive response as compared to females; it is similar to a study conducted by Lau AM in Hong Kong. Another study by JC Penman possibly, gender can have a role in managing emotions, maintaining self-integrity, and helping patients while making decisions.

Palliative care was favoured by 205 (64%) students because, regardless of the prognosis, the ultimate goal is to improve the quality of life for the family as well as the patient. In this study, preference for palliative care over euthanasia was high, concurrent to studies conducted in Karachi. In Pakistan, medical students begin clinical rotations mostly in the third year. It deepens their understanding of incurable diseases and the associated physical, mental, and emotional challenges for patients and their families. In this study, confusion regarding euthanasia practice was seen towards euthanasia. Male students showed positive response as compared to females; it is similar to a study conducted in Karachi. In a nutshell, clinical exposure is another essential factor altering medical students' attitude towards euthanasia.

Family physicians and nurses play a significant role in determining the extent of illness, effectiveness of medication, patient's tolerance level and compliance to it. In this study, the majority of students were unwilling to discuss patient's end-of-life decisions with nurses and family physicians, revealing that only a small portion of students were aware of this practice. In contrast, Dutch people demonstrated an excessive openness to discuss the need of euthanasia with nurses and family physicians.

This study was able to assess the attitude towards euthanasia and PAS, with preference for palliative care and passive euthanasia over them. Relation of only few variables regarding euthanasia is identified, others can be assessed further. The main limitation in the current study was that it was a single-centre study. Also, it is important to highlight why passive euthanasia is more acceptable than active euthanasia. From the above mentioned limitations, it is clear that more research on this topic would be worthwhile.

Conclusion
Majority of the students opposed euthanasia and physician-assisted suicide (PAS) because of their religious beliefs and optimistic approach to life. A significant rise in compliance with euthanasia is discovered among undergraduate medical students even though it is equivalent to murder in Islam. Such contrasting results can baffle a physician to make wise decisions. Hence, euthanasia and PAS must be covered in medical curriculum in depth in order to help future physicians clearly understand its practice under all circumstances.

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References


Author Contribution:
M: Conceived, designed questionnaire, manuscript writing, proof reading.
ANS: Data collection, analysis, interpretation, abstract writing.
HS: Data collection, literature review, manuscript writing.
NA: Questionnaire modification, data collection.
AA: Supervision, reviewed manuscript.