

TEACHING AND LEARNING ETHICS

Students' attitudes and potential behaviour to a competent patient's request for withdrawal of treatment as they pass through a modern medical curriculum

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Objective: To examine students' attitudes and potential behaviour to a competent patient's request for withdrawal of treatment as they pass through a modern medical curriculum.

Design: Cohort design.

Setting: University of Glasgow Medical School, United Kingdom.

Subjects: A cohort of students entering Glasgow University's new learner centred, integrated medical curriculum in October 1996.

Methods: Students' responses before and after year 1, after year 3, and after year 5 to the assisted suicide vignette of the Ethics in Health Care Survey instrument, were examined quantitatively and qualitatively. Analysis of students' multichoice answers enabled measurement of the movement towards professional consensus opinion. Analysis of written justifications helped determine whether their reasoning was consistent with professional consensus and enabled measurement of change in knowledge content and recognition of the values inherent in the vignette. Themes on students' reasoning behind their decision to withdraw treatment or not were also identified.

Results: Students' answers were found to be consistent with professional consensus opinion precurriculum and remained so throughout the curriculum. There was an improvement in the knowledge content of the written responses following the first year of the curriculum, which was sustained postcurriculum. However, students were found to analyse the section mainly in terms of autonomy, with few responses considering the other main ethical principles or the wider ethical perspective. Students were unclear on their legal responsibilities.

Conclusions: Students should be encouraged to consider all relevant ethical principles and the wider ethical perspective when deliberating ethical dilemmas. Students should have a clear understanding of their legal responsibilities.

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Legal history was made recently when a tetraplegic patient became the first person to successfully apply to the High Court to have her life prolonging treatment, in the form of artificial ventilation, withdrawn.¹ It is well established in ethics and law that competent adults have the right to refuse any medical treatment even if that refusal results in their death. This position was reinforced in the United Kingdom when the Human Rights Act 1998, an act rooted in respect for the dignity of the person, came into force in October 2000.² UK law distinguishes withdrawing life prolonging treatment from euthanasia and assisted suicide, which are illegal in the UK under the Suicide Act 1961, a position upheld in a recent House of Lords ruling.³

Doctors are sometimes reluctant to withdraw active treatment when the patient is competent, informed, and requesting such a course of action. Tweeddale⁴ argues that latent medical paternalism may come to the surface when doctors are asked by patients to follow a course of action which conflicts with their own perspective.

In recent years the UK has followed North America in bringing ethics and law into the mainstream of undergraduate medical curricula.⁵ "Tomorrow's doctors", the General Medical Council's consultative document on the future of undergraduate medical education in the UK, recommends ethics and law as a core curricular theme.⁶ The UK consensus statement on undergraduate teaching of medical ethics and law recommends that withholding and withdrawing life prolonging treatment, euthanasia, and assisted suicide are included as core curricular topics.⁷

Unfortunately, few evaluation studies of these curricula have been undertaken and as a result little is known about students' attitudes and potential behaviour relating to these issues.⁵⁻⁸

The University of Glasgow introduced a new learner centred, integrated medical curriculum in 1996 which has medical ethics and law as one of the themes running throughout the five year course. This provided an opportunity to study longitudinally the effect of ethics teaching on students' potential behaviour on facing ethical dilemmas. As part of this study, it was possible to examine students' attitudes and potential behaviour to the withdrawal of life prolonging treatment as they progressed through the curriculum.

SUBJECT AND METHODS

A cohort of 162 students from the first intake of Glasgow's new curriculum were studied. The adapted Ethics in Health Care Survey Instrument (EHCI) was used. The EHCI consists of 12 vignettes, which include an ethical dimension. In addition to asking subjects to choose one of the preset answers to each vignette, the EHCI also asks them to justify their chosen response.⁹⁻¹⁰ For the purpose of this study only the responses to vignette 1 (box 1), were considered.

In October 1996, the EHCI was distributed to the 238 students entering the new curriculum. There was no

Abbreviations: EHCI, Ethics in Health Care Survey Instrument.

BOX 1**Question 1: Assisted suicide**

Katherine Lewis is a 40 year old woman suffering from Guillain Barré Syndrome, a painful neurological illness that leaves its sufferers paralysed for unpredictable lengths of time. Many people recover from the syndrome more or less completely and live long relatively healthy lives. However, Katherine herself has been paralysed for THREE years and requires assistance from a ventilator to breathe. During this time she has been under your care. Ten months ago, it was determined that Katherine would never be able to move or breathe on her own again because of the extent of damage to her nerves and muscles. You explained this to Katherine in a gentle but clear manner. Last week Katherine asked to speak with you privately. She told you that she had considered her options, and had decided that she no longer wanted to live. She said her life held no value for her if it meant being in constant pain and without the freedom to move or even breathe on her own. She tells you that she has discussed this with her family and that they have accepted her wishes to have the ventilator removed.

Your options are:

- You apply for a court order to permit you to withdraw the treatment.
- You refuse to assist her.

Please state the reasons for your choice:

compulsion for students to undertake the questionnaire; their participation was entirely voluntary. The students were assured of this and of the confidentiality and anonymity of their responses. A consent form was attached to the instrument. A total of 162 students returned a completed EHCI before year 1, forming the cohort under observation.

Ethics teaching is mainly delivered in the first three years of the curriculum as part of the vocational studies course. The main teaching format in vocational studies is small group teaching led by a generalist clinical tutor. The content of vocational studies ethics sessions has been previously described.^{9 10} The EHCI was distributed to the cohort at the end of year 1 (the year where the largest proportion of ethics sessions take place), and at the end of year 3 following completion of vocational studies.^{9 10}

A total of 101 students left the curriculum after year 3 to undertake an intercalated BSc, of whom 67 were from the cohort. The remaining students entered the predominantly clinical years of the curriculum, during which formal ethics teaching consists of two 2 hour small group workshops along with 11 half day topic teaching lectures and large group sessions. Although each of the half day sessions contains an ethical component, only one of the sessions is directly related to ethics and law. The emphasis in ethics teaching in years 4 and 5 is on preparation for professional life, including working with others and critical case analysis. In April 2001 the EHCI was distributed to cohort students who were in the process of completing the medical curriculum.

Students' preset responses to the consensus questions in each questionnaire were tabulated on an Excel spreadsheet. The written responses to each vignette were transcribed and added to the database.

Analysis

Students' multichoice responses to case 1 were compared, at the four time points, to determine if their views were consistent with the consensus judgement of informed

Box 2**Consensus responses**

- Category 1: Based on the consensus reasoning of experts in the field of medical ethics, legal requirements on practitioners, or on policies issued by relevant professional institutions.

Subcategories of non-consensus responses

- Category 2: Based on the subject's personal values/morality.
- Category 3: Influenced by other non-medical/legal value systems.
- Category 4: Although based on moral argument, it is not consistent with the profession's normative values.
- Category 5: Indeterminate.

professionals precurriculum, and if they changed as they progressed through the curriculum.

Students' written justifications of their preset answer were classified independently by the researchers (JG and JM). They were initially classified as being either a "professional consensus" or an "other" response, a form of data reduction after Huberman and Miles.¹¹ A "professional consensus" response was considered to be one based on the consensus reasoning of experts in the field of medical ethics, legal requirements on practitioners, or on policies issued by relevant professional institutions. The "other" response category was subclassified (box 2). These categories were derived from the reflections of the Glasgow researchers (JG, LS, JM) and one of the original developers of the instrument (Ken Kipnis, University of Hawaii), and grounded in responses given by students in both Hawaii and Glasgow.¹²

Students' written categories were also compared with their choice of preset answer to help determine whether their thinking was consistent with professional consensus.

Responses judged to be consensus responses were further classified on the hierarchies of subjects' action justifications and values recognition (boxes 3 and 4). The hierarchical levels were grounded in responses given by Glasgow students and influenced by the consensus aim of medical ethics education.⁵ Comparison of the positions of students' justifications on the hierarchies before and after instruction was used as measures of change following instruction.¹²

The reliability of the categorisation/classification process was estimated using the kappa coefficient (table 1). The

BOX 3**Hierarchy of subjects' action justifications**

- Level 3: The subject, in proposing a course of action, not only demonstrates the ability to identify, classify and analyse the issue(s) involved, but also demonstrates the ability to consider alternatives when deciding his/her course of action.
- Level 2: The subject, in proposing a course of action, demonstrates his/her ability to identify, classify and analyse one or more of the ethical issue(s) contained.
- Level 1: The subject, in proposing a course of action, demonstrates that he/she is able to recognise and/or identify one or more of the ethical issue(s) contained.

BOX 4

Values recognition hierarchy

- Level 4: The subject recognises the value system(s) inherent in his/her course of action, the value system(s) of the individuals involved in the decision making process and those of wider society.
- Level 3: The subject recognises both the value(s) inherent in his/her course of action and those of the individual(s) involved in the decision making process.
- Level 2: The subject recognises the value(s) inherent in either his/her course of action or those of the individual(s) involved in the decision making process.
- Level 1: There is no recognition of the value(s) inherent in the subject's proposed course of action or those of the individual(s) involved in the decision making process.

results indicated acceptable interrater reliability. Following independent rating, areas of disagreement between the raters on the categorisations and hierarchical classifications of the written responses were identified, and the responses were further examined and discussed until agreement was reached.

Students' written responses were further coded independently by JG and JM to identify themes for students' reasoning behind their decision to withdraw treatment or not. Crosschecking of the researchers' themes showed a high level of agreement.

RESULTS

A total of 111 cohort students returned an EHCI after year 1 and 85 after year 3. The final year class contained 107 students, 102 of whom were from the original intake and 79 from the original cohort. Sixty two cohort students returned the EHCI after year 5. All 62 respondents had provided a multichoice answer to vignette 1. There were pre and postcurriculum written responses to vignette 1 from 56 students. Thirty three students provided written responses on four occasions and a further 11 on three occasions. Students remaining from the original cohort were similar to the whole class in terms of age (mean age 24 years; whole class, 23 years 8 months), sex (male:female 1:2.5; whole class, 1:2), origin overseas (10%; whole class, 9%), and holding a previous degree(s) (8%; whole class, 8%). They were also similar to the original cohort in terms of sex (1:2.5; cohort, 1:2), overseas origin (10%; cohort, 9%), and holding a previous degree (8%; cohort, 5%).

Analysis of the cohort's choice of preset answer to case 1 showed students' answers to be consistent with professional consensus opinion precurriculum, and remained so throughout the curriculum. This was corroborated by the analysis of

Table 1 Kappa coefficients for the agreement between the two researchers on the categorisations and hierarchical classifications of students' written justifications on all survey occasions

Categorisation as consensus or non-consensus	Five category classification	Action justification hierarchy	Values recognition hierarchy
Kappa 0.78	0.76	0.80	0.88

Table 2 Comparison of the number of consensus written justifications provided by students with the number of consensus multichoice responses chosen for each time point

	Consensus justifications provided	Consensus multichoice response chosen	% Agreement
Before year 1 (n = 56)	42	47	89%
After year 1 (n = 44)	40	42	95%
After year 3 (n = 33)	25	31	80%
After year 5 (n = 56)	43	48	90%

the written justification categorisations (table 2). There was little movement in students' positions as they progressed through the curriculum (table 3).

Students' reasoning behind their choice of the consensus preset answer was found to be aligned with the consensus thinking of the profession (table 2). Where students' reasoning was not consistent with professional consensus thinking it was found to be based mainly on their personal values/morality (table 4).

Students' performance as they progressed through the curriculum, in terms of the position of their written justifications on the hierarchies, is shown in table 5.

There was an improvement in the knowledge content of the written responses following the first year of the curriculum. This improvement was sustained postcurriculum. On the values recognition hierarchy, the majority of responses precurriculum were on level 3. There was little change postcurriculum, with no justifications being classified as level 4.

Students' reasoning behind their decision to comply with the patient's decision to withdraw treatment is shown in table 6. Often more than one theme was identified from a response. Where the decision was to assist the patient, the main reasoning used precurriculum related to the importance of considering the wishes of the patient and her family and the issue of the quality of her life:

"Despite what condition a patient maybe in she retains the choice of whether or not to continue with this quality of life. If she is of reasonable mental health and her family is aware of the situation, then it is not for the doctor to stand in her way."

As the curriculum progressed more sophisticated responses were provided which considered the issues in terms of the underlying principle of patient autonomy with its prerequisites of competence and informed consent:

"Katherine is competent to make a decision—she has stated her consent. She has spoken to her immediate family regarding her decision—they are willing to comply. This is passive physician assisted suicide—that is, no pills or injections are to be actively administered."

Table 3 Stability of students' responses/written justifications, pre- to postcurriculum, in terms of their consensus/non-consensus categorisations

Students' pre and post positions	Written justifications	Multichoice responses
Consensus/consensus	38	41
Consensus/non-consensus	6	5
Non-consensus/consensus	9	7
Non-consensus/non-consensus	3	3

Table 4 Researchers' categorisation of written justifications judged not to be consistent with consensus reasoning, with students' corresponding multichoice answer at each survey point

	Category	Before year 1	After year 1	After year 3	After year 5
Multichoice answer	2	2	0	0	3
	3	1	0	2	1
	4	5	2	0	3
Non-consensus	5	1	0	0	1
	2	5	2	4	3
	3	0	0	0	0
	4	0	0	1	1
	5	0	0	1	1

"A physician must respect the wishes of a competent adult who has given (their) consent to withdraw treatment."

The legal implications of assisting the patient were considered more frequently as the curriculum progressed: "Court order keeps it legal. Withdrawing treatment allows a patient to "die" rather than be killed. It's the right and decent thing to do. Agreeing to her last request gives her control and dignity."

Where the reasoning behind the consensus preset answer was not aligned with professional consensus thinking, the justification most often cited was that a doctor's overriding duty is to prevent suffering:

"I believe it is the doctor's duty to prevent suffering and this patient's is obviously great. This is an example of the conditions under which euthanasia should be allowed."

Where students decided not to comply with the patient's decision to have treatment withdrawn, the commonest justifications provided were that it conflicted with the duty of doctors to preserve life and/or with students' personal and religious beliefs:

"Unless a patient is brain dead I believe no doctor has the right to assist suicide. Instead he/she should strive to improve the quality of (her) life. As a Christian I believe only God has the right to take life."

DISCUSSION

Cohort studies are particularly appropriate in research on human growth and development. They provide greater opportunity to observe trends and to distinguish "real" change from chance occurrences.¹³ This study, like most cohort studies, suffered from sample mortality. Students undertaking intercalated degrees were a major factor in sample mortality. However, cohort students consisted of 60% of the students completing the new Glasgow medical curriculum. They were representative of the year as a whole and of the original cohort.

Cohort studies can also suffer from "control effects". This was a potential source of bias because the same instrument was used on four separate occasions. However, the time interval of one year between the first and second stages; two years between the second and third stages of the study; and a further two years between the third and fourth stages made this less likely. In addition, the students did not receive feedback on the "correct" answer to vignette 1, or on how they performed individually.

Students' views were found to be highly consistent with professional consensus opinion precurriculum and this continued throughout the curriculum, with little movement of views pre- to postcurriculum. These findings are a further illustration that students do not start their ethical learning from a position of having little or no knowledge, or having

Table 5 Hierarchical ratings given by the researchers to written justifications judged to be based on reasoning consistent with professional consensus at each survey point

	Before year 1	After year 1	After year 3	After year 5
Action justification hierarchy				
3	0	0	0	0
2	1	16	9	19
1	41	24	16	24
Values recognition hierarchy				
4	0	0	0	0
3	30	33	23	39
2	12	6	2	4
1	0	1	0	0

few opinions on ethical matters.^{9, 10} However, there are obvious problems with consensus as a method of decision. It can be parochial and not sensitive to particular features of a specific case.¹⁴ Indeed the case recently before the UK courts was based on a collision between a professional consensus opinion about withdrawal of treatment and the autonomous choice of a particular patient.

Cohort studies can suffer from the interaction of biological, environmental, and intervention influences. In medical curricula, the longer students are exposed to the hidden curriculum and the process of "moral enculturation", the greater the risk of students' ethical development being detrimentally affected.¹⁵ There was no evidence of the hidden curriculum adversely affecting students' development through promoting "medical paternalism".⁴ A factor in this may have been the emphasis placed on the principle of autonomy. Autonomy, its challenges, informed consent and confidentiality, formed the main thrust of teaching in the first year of the curriculum where most ethical teaching took place. Our previous studies, using the full EHCI, showed the main areas of improvement in student performance related to the areas of autonomy, confidentiality, and consent.^{9, 10} Perhaps this emphasis on autonomy counteracted the negative effects of the medical socialisation process in terms of its promotion of paternalism.

Cognitive learning, in terms of an improvement in the sophistication of the written justifications provided, was evident. After year 1, and throughout the rest of the curriculum, justifications for the decision to assist the patient with her decision to withdraw life prolonging treatment increasingly identified, classified, and analysed the issue in terms of the principle of patient autonomy and its prerequisites of patient competence and informed consent. Few responses, however, analysed the problem in terms of the other main ethical principles such as beneficence, non-maleficence, and justice as determined in Beauchamp and Childress' "The Principles of Biomedical Ethics".¹⁶ Although all the principles were covered in teaching sessions, the principle of autonomy, as mentioned previously, was emphasised. Perhaps this resulted in students focusing on autonomy to the exclusion of the other main principles when considering ethical problems. It may also reflect conformity with current professional attitudes such as those described in GMC policy, or a harmony with current cultural perceptions that partnership or patient centred care is more respectful of the dignity of persons as patients.¹⁷

Students, by the end of the curriculum, increasingly considered the legal implications of the withdrawal of treatment in their justifications. The recent High Court decision ruled that doctors are acting illegally if they refuse to comply with a competent patient's request to switch off

Table 6 Students' reasoning behind their decision for or against assisting the patient's suicide and the frequency of their occurrence at each survey point

Reasoning behind the decision to assist suicide	Before year 1	After year 1	After year 3	After year 5	Total
<i>Reasoning used in answers considered to be professional consensus based</i>					
Patient's wishes	22	8	6	16	52
Patient's and families' wishes	7	10	5	8	30
Families' wishes	0	1	2	1	4
Patient's autonomy	2	5	5	6	18
Patient is competent	1	10	8	16	35
Patient is able to provide informed consent	0	3	2	7	12
Quality of life	14	8	4	6	32
No hope of recovery/can't live without assistance/let nature take its course	11	5	6	10	32
Important to have the decision legally sanctioned	1	2	1	6	10
Withdrawal of treatment is not euthanasia	0	0	0	2	2
Let her die with dignity	1	0	0	0	1
<i>Reasoning used in answers considered not to be professionally consensus based</i>					
To prevent her suffering	1	2	1	0	4
She's better off dead	2	0	0	0	2
She can't recover	1	0	0	1	2
If it were me	1	0	1	0	2
In this situation euthanasia is justified	0	0	1	0	1
Illegal, but court will legalise it	0	0	0	1	1
Let the court decide	0	0	0	1	1
Pass it onto another doctor to decide	0	0	0	1	1
For the greater good	1	0	0	0	1
<i>Reasoning behind the decision not to assist patient's request to withdraw treatment</i>					
Doctor's duty to preserve life/respect for life	4	2	0	1	7
Religious belief	2	0	2	2	6
Personal belief	0	0	0	3	3
Illegal to assist patient	1	0	0	2	3
Can relieve suffering without ending life	0	0	0	1	1
She may change her mind	1	0	0	0	1
In case family turn against you	0	0	0	1	1
Need more time to make decision	1	0	0	0	1

their ventilator even if it would result in their death.³ If doctors feel unable to do this then they must arrange for the patient to be transferred to the care of a colleague who is prepared to comply with the request.¹⁸ Where the course of action chosen was not to assist the patient with her decision, only two of the respondents' justifications advocated referring the case to a colleague. Although it is important that students know and consider their professional legal duties in order to function safely and responsibly, the emphasis in the ethics education sessions was to recognise that what a person may judge to be morally required of him or her may not necessarily coincide with what is required by law. Students were asked to respond by selecting a legally

acceptable choice of action and then justify the selection. They were encouraged to recognise that it would not have been sufficient to respond by stating the legal obligation alone. In recognising this required justification by moral argument is an indication that some of the course objectives had been met.

Students' recognition of values was found to be stable throughout the curriculum, with most students recognising the values inherent in their course of action while considering the values of the other individuals involved in the decision process. There were no responses however, which considered the macroethical perspective. An approach to ethical problem solving in which the views of wider society are considered is an aim of medical ethics education.⁵ Hafferty and Franks warn against the dangers of over-emphasising microethical issues at the expense of macroethical issues.¹⁵ Other writers however, including JS Mill, have argued the necessity to ensure the protection of individual rights over the tyranny of the majority. This emphasises the microethical approach consistent with patient centred care. A balance needs to be struck between the two. Although macroethical issues were covered in the Glasgow curriculum, perhaps their relevance was mainly perceived by students as being contextual.

This paper has implications for the future planning of ethics teaching in the Glasgow curriculum. Students should be encouraged to consider all relevant ethical principles and consider the wider ethical perspective when deliberating ethical dilemmas. Students should also have a clear understanding of their legal responsibilities in the issue of withdrawal of treatment and be able to offer considered ethical reasons for obeying these laws, or be able to justify disobedience in the remote chance they judge it necessary to break the law to protect their patients.

CONTRIBUTORS

JG conceived and designed the study, collected data, supervised data analysis, and wrote the paper. JM was involved in the conception and design of the study, its ongoing management, analysis of data, and contributed to the writing of the paper. LS was involved in the conception and design of the study and contributed to the writing of the paper.

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LETTERS

Prenatal sex and race determination is a slippery slope

I am deeply worried about your guest editorial,¹ please allow me a few bullet points:

- Trying to dispel some of the counter-arguments to sex selection, your argument of prospective parents' autonomy is void. If anyone has a right to determine his or her sex, it would be the person concerned, in this case the unborn child. Granted, hereditary sex related disease may force us to make tough choices; but surely the parents will not have surrogate decision making power in the absence of such a dire dichotomy. Would the child be able to sue the parents for making a bad choice?
- The threat of neglect or abuse a girl might face, should her "deselection" not be permitted, amounts to hostage taking of the unborn life. The same applies also to the burden a family or society may put on a woman, by forcing her into multiple pregnancies, until she delivers the desperately wanted son! What is more, the fact that a law might be ignored or disregarded, has rarely been an accepted argument for its repeal.
- In fact, should pro-male sex selection become widespread in an already sexist society, this would most likely be a prerogative for the affluent and resourceful, reinforcing the existing inequality. Say—for example, that predominantly male children would be born to privileged parents; the parents would then provide them with more opportunities, leaving the other sex to grow up in even more disadvantaged circumstances.
- The slippery slope becomes most obvious, however, if we imagine racially discordant

couples wanting to determine their offspring's race and colour, be it based on (justified?) fears about societal abuse, neglect, and disadvantage, or their wish to "balance their families", or even only as a matter of taste...

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Prenatal sex and race determination is a slippery slope: author's reply

It may be most convenient to respond to Dr Andreae's points in turn.

- Unless the claim that a child should determine its own genetic characteristics before it is conceived or born is intended to be flippant, it is logically incoherent. Conception is a decision that only a prospective parent can make. The editorial argument is that denial of choice of sex contributes to preventable maternal mortality and morbidity, particularly in developing countries. None of Dr Andreae's concerns addresses the ethics of tolerating the estimated daily toll of 1400 women, an estimated 515 000 women each year, who die of pregnancy related causes, over 99% of whom are in developing countries of the world.¹ Many deaths are due to pregnancies that come too soon, too late, too often, and too closely spaced in women's reproductive lives because of pressure to deliver sons.
- The second point acknowledges that women's lives are currently held hostage

to multiple pregnancies to produce sons. Opposition to legal reform to relieve this burden tolerates exploitation of women's vulnerability to repressive laws and policies. Ethical analysis in countries committed to justice between women and men increasingly leads to repeal or amendment of laws that repress women's choices. Reformed laws serve to mitigate historic attitudes that treat individual women's reproductive capacities as subject to public manipulation.

- Willingness, reflected in point 2, to maintain women as instruments of state reproductive policies, even for benign purposes, is itself sexist, exploiting existing inequalities that deny women control over their reproductive options. Where son preference prevails, it is increasingly recognised that daughters must also be valued, not least to provide sons with wives and mothers of their children.
- Apart from the inherent unreliability of slippery slope arguments as a basis for ethical public policies, extension of the argument for sex selection after birth of a first child to race is pragmatically unwarranted. There is demonstrable maternal mortality and morbidity where sex selection is denied; there is no evidence of the same related to denial of selection for family balancing on other grounds. Policy indicates that women should not be abandoned to preventable deaths to relieve any imagined speculative or theoretical concerns.

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