



Nursing, Midwifery and Medical Students' Attitudes toward Induced Abortion in Manisa, Turkey

**Dilek Ozmen^{1*}, Nursen Bolsoy², Aynur Çakmakçi Çetinkaya¹,
Seval Cambaz Ulaş² and Beyhan Cengiz Özyurt³**

¹Department of Public Health Nursing, Faculty of Health Sciences, Manisa Celal Bayar University, Manisa, Turkey.

²Department of Midwifery, Faculty of Health Sciences, Manisa Celal Bayar University, Manisa, Turkey.

³Department of Public Health, Faculty of Medical, Manisa Celal Bayar University, Manisa, Turkey.

Authors' contributions

This work was carried out in collaboration between all authors. Author DÖ designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript. Authors SCU, AÇÇ and BCÖ' managed the analyses of the study. Authors NB and DÖ managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Introduction: Induced abortion, defined as terminating pregnancy intentionally by medical intervention, has been discussed for centuries due to its medical, religious, moral, sociological and reproductive aspects.

Objective: The purpose of this study was to investigate nursing, midwifery and medical students' attitudes towards induced abortion and the variables affecting these attitudes.

Materials and Methods: The study sample included 180 students. All participants have to go through from three different questionnaire sets: first one is based on socio-demographic aspects with 9 questions; second one is related to inventory attitude questionnaire towards abortion with 12 questions and finally the third questionnaire is on knowledge of abortion with 14 questions. Now all the data are calculated statistically with calculation number distribution, chi square test and logistic

*Corresponding author: E-mail: ozmendilek@yahoo.com;

regression.

Results: The students did not have a negative attitude towards induced abortion. They even had a positive attitude towards induced abortion in cases of medical or social necessity. Perceived religiousness had a negative effect on attitudes towards induced abortion, and increased knowledge about abortion and culture had a positive effect on attitudes towards abortion. Logistic regression analyses showed that the variable significantly correlating with the highest number of statements about attitudes was religiosity.

Conclusions: It is possible to say that students with future health professionals generally have supportive attitudes towards induced abortion.

Keywords: Nursing students; midwifery students; medical students; induced abortion; attitudes.

1. INTRODUCTION

Induced abortion, defined as terminating pregnancy intentionally by medical intervention, has been discussed for centuries due to its medical, religious, moral, sociological and reproductive aspects [1,2]. Abortion performed under inappropriate conditions affects women's health, while abortion performed by specialists under appropriate conditions as described by law plays an important part in prevention of maternal deaths [3,4]. In countries where abortion upon women's requests due to social reasons is legal, the right to have an abortion has been restricted by weeks of gestation. In Turkey, where 99% of the population is Muslim, induced abortion was legalised in a law enacted in 1983, which stipulated: "The uterus must be evacuated before the tenth week of gestation is completed, and it must not be harmful to maternal health." The law allows women to have abortions in state hospitals at a very low cost and in private hospitals at variable costs [5]. The incidence of induced abortion varies with socio-economic status and the socio-cultural composition of countries. According to the results of the Turkey Demographic and Health Survey (TDHS) in 2008, 10% of pregnancies in Turkey are terminated through induced abortion [6].

The barriers that make it difficult for women to get abortions include: insufficient numbers of appropriately educated health staff, insufficient equipment, heavily loaded work schedules in hospitals and health staff's negative attitudes towards abortion [7,8]. It has been reported that doctors' and other health staff's objections to abortion have a negative impact on women's access to induced abortion [9-11]. Considering the fact that one woman dies every eight minutes due to unsafe abortions, it seems that health staff's attitudes towards induced abortion play an important role in women's health [7]. Attitudes are tendencies which cannot be observed, but are assumed to cause behaviour, which can be

observed. An investigation of the dynamics of attitudes may help one predict the way attitudes determine behaviour [12].

There have been studies on attitudes of medical, nursing and midwifery students towards induced abortion in many countries [9-11,13-18]. However, to our knowledge, there are no studies of these students' attitudes towards induced abortion in Turkey.

This study investigates senior medical, nursing and midwifery students' attitudes towards induced abortion and the factors likely to affect their attitudes at a university in Turkey.

2. METHODOLOGY

This study is descriptive in nature. Senior students studying nursing (n=97) and midwifery (n=48) and at the School of Health and Medicine (n=85) in the Faculty of Medicine at Celal Bayar University comprised the study population (n=230). No sampling methods were used. Out of a total of 230 senior students in the study population, 180 were willing to participate in the study and available at school on the days when data were collected. These were the students included in the study sample. All students included in the sample gave informed consent, and data were collected during face to face interviews. Of the 180 students, 65 were from the Faculty of Medicine, 76 were from Nursing Department and 39 were from Midwifery Department. The response rate was 78.3%. Medical students attended gynaecology and obstetrics courses in their third, fourth and sixth years. Nursing students attended a gynaecology and obstetrics Nursing course in their third year, and midwifery students study gynaecology and obstetrics throughout their education at the university.

Ethical approval was obtained from the Ethics Committee of the Medical School and official

permission was granted by the School of Health Directorate and the Dean of the Faculty of Medicine of Celal Bayar University. No financial support was received for the research. There is also no conflict of interest between authors.

Data were collected with a socio-demographic Information Form, an Inventory for Attitudes towards Induced Abortion and an Induced Abortion Knowledge Form.

2.1 The Socio-demographic Information Form

This form was composed of nine questions about age, gender, school, and income, primary residence, parents' educational background, mothers' employment status and perceived religiosity.

2.2 The Attitudes towards Induced Abortion Inventory

This was developed by the researchers to investigate attitudes towards induced abortion. A pool of 34 items was formed in the light of the relevant literature. Expert opinions about these items in terms of their understandability, relevance for the aim of the study and ability to differentiate was obtained from experts in the relevant field to check the content validity of the inventory. The content validity of the inventory, which was revised in accordance with the experts' opinions and recommendations, and in which the number of the items decreased to 14, was proven. Out of 14 items in the inventory, 6 [1-6] were affirmative statements and 8 [7-14] were negative statements. The items are scored on a five-point Likert scale: 5 corresponding to completely agree, 4 agree, three moderately agree, 2 disagree and 1 completely disagree. The negative statements in the inventory are scored in the reverse order. The highest and the lowest scores to be obtained on the inventory is 70 and 14, respectively. Higher scores indicate a positive attitude towards induced abortion.

Cronbach's Alpha was determined to evaluate the internal consistency of the inventory and it was found to be 0.78. For logistic regression analysis the responses "completely agree", "agree" and "moderately agree" were grouped under the heading "agree," and the responses "disagree" and "completely disagree" were categorised under the heading "disagree."

2.3 The Knowledge of Induced Abortion Form

This form was developed by the researchers to evaluate knowledge about induced abortion. The questions in the form were about subjects such as the definition of induced abortion, legal aspects of induced abortion, problems likely to arise after induced abortion and informed consent from spouses. The form consists of 12 items. A score for knowledge of induced abortion is obtained based on correct responses. Each correct answer is assigned 1 point. The highest and the lowest scores to be obtained for the form are 12 and 0, respectively.

Before collecting data, the data collection tools were pilot tested with 10 students. The students did not make any recommendations which required revision of the items in the tools. Data from the pilot test were excluded from the analyses. It took 15-20 minutes for the students to complete the data collection tools. Religiosity was evaluated by using a question taken from the study "Religion, Secularism and Veil in Daily Life Survey" conducted by KONDA Research and Consultancy Company [19].

Data were analysed using SPSS 16.0 with distributions of numbers and percentages, Chi-square analyses and logistic regression.

3. RESULTS

Of the students included in the study, 68.9% were female, 50.6% were between 22 years and 23 years of age, and 66.7% had a family income equal to their expenses. Of them, 52.8% reported that the place as where they had lived the longest in a city and 84.4% had a nuclear family. Of the students' mothers, 70.3%, and of the students' fathers 45.6% were primary school graduates. Of the students' mothers, 75.1% did not have jobs. Of the students, 53.3% defined themselves as a religious person who does not necessarily perform their religious rituals, and 41.7% defined themselves as a religious person who makes an effort to fulfil their religious rituals. Of the students, 33.3% had a score of knowledge about induced abortion lower than the mean scores (8.95 ± 1.59 , minimum: 2.00, maximum: 12.00, median: 9.00, Table 1). The mean scores of knowledge of induced abortion were 9.33 ± 1.57 for the medical students, 8.32 ± 1.57 for the nursing students and 9.51 ± 1.21 for the midwifery students, whose scores were the highest (Table 1).

Table 1. The distribution of general characteristics of the students

General characteristics		Medical		Nursing		Midwifery		Total	
		n	%	n	%	n	%	n	%
Gender	Female	25	38.5	60	78.9	39	100.0	124	68.9
	Male	40	61.5	16	21.1	0	0	56	31.1
Age	21yrs or younger	0	0	29	38.2	13	33.4	42	23.3
	22-23yrs	33	50.8	41	54.0	17	43.6	91	50.6
	24 yrs or older	32	68.1	6	12.8	9	19.1	47	26.1
Perceived income	Lower than expenses	21	32.3	6	7.9	3	7.7	30	16.6
	Equal to expenses	42	64.6	50	65.8	28	71.8	120	66.7
	Higher than expenses	2	3.1	20	26.3	8	20.5	30	16.7
The place where one has lived the longest	Village	2	3.1	17	22.4	8	20.5	27	15.0
	Town	14	21.5	31	40.8	13	33.3	58	32.2
	City	49	75.4	28	36.8	18	46.2	95	52.8
Family type	Nuclear	58	89.2	58	76.3	36	92.3	152	84.5
	Extended	7	10.8	15	19.7	2	5.1	24	13.3
	Separated	0	0	3	3.9	1	2.6	4	2.2
Mother' education*	Primary school graduates or just literate	30	52.4	62	82.7	31	83.8	123	70.3
	High school graduates or higher education	33	47.6	13	17.3	6	16.2	52	29.7
Mother's employment status**	Employed	23	36.5	13	17.1	8	21.1	44	24.9
	Unemployed	40	63.5	63	82.9	30	78.9	133	75.1
Father's education*	Primary school graduates or just literate	16	24.6	41	53.9	24	61.5	81	45.0
	High school graduates or higher education	49	75.4	35	46.1	15	38.5	99	55.0
Perceived religiosity	Someone with no religious conviction	3	4.6	1	1.3	0	0	4	2.2
	Someone who does not believe in religious obligations	2	3.1	1	1.3	0	0	3	1.7
	Believer who does not fulfil religious obligations	36	55.4	37	48.7	23	59.0	96	53.3
	Religious person who strives to fulfil religious obligations	24	36.9	36	47.4	15	38.5	75	41.7
	Fully devout person fulfilling all religious obligations	0	0	1	1.3	1	2.6	2	1.1
Scores for knowledge of induced abortion * (8.95±1.59, min:2.00, max:12.00, median:9.00)	Lower than the mean scores	14	21.5	36	47.4	10	25.6	60	33.3
	Equal to or higher than the mean scores	51	78.5	40	52.6	29	74.4	120	66.7
Total		65	36.1	76	42.2	39	21.7	180	100.0

*Five students did not answer the question about the mother's education, ** Three students did not answer the question about the mother's employment

Table 2. The distribution of students' attitudes towards induced abortion

Statements about attitudes towards induced abortion		Medicine (n=65)*		Nursing (n=76)*		Midwifery (n=39)*		Total (N=180)	
		Agree %	Disagree %	Agree %	Disagree %	Agree %	Disagree %	Agree %	Disagree %
Positive statements	The woman can have an induced abortion in case of unwanted pregnancy **	84.6	15.4	65.8	34.2	74.4	25.6	74.4	25.6
	Induced abortion is an intervention in the woman's body	70.8	29.2	84.2	15.8	76.9	23.1	77.8	22.2
	The woman can have an induced abortion if she cannot look after her baby	60.0	40.0	55.3	44.7	71.8	28.2	60.6	39.4
	The woman can have an induced abortion if the foetus suffers from a serious defect or anomaly	72.3	27.7	73.5	26.5	79.5	20.5	74.4	25.6
	The mentally-disabled woman can have an induced abortion	64.6	35.4	69.7	30.3	79.5	20.5	70.0	30.0
	The woman can have an induced abortion if her pregnancy risks her health.	86.2	13.8	92.1	7.9	94.9	51.1	90.6	9.4
Negative statements	Induced abortion is a sin	41.5	58.5	82.9	17.1	64.1	35.9	63.9	36.1
	God gives everybody's sustenance and therefore induced abortion is not necessary***	44.6	55.4	65.8	34.2	43.6	56.4	53.3	46.7
	The woman can only have an induced abortion following a rape	26.2	73.8	43.4	56.6	38.5	61.5	36.1	63.9
	The woman must not have an induced abortion under any circumstances	18.5	81.5	30.3	69.7	30.8	69.2	26.1	73.9
	Induced abortion is shameful ****	15.4	84.6	30.3	69.7	43.6	56.4	27.8	72.2
	Induced abortion is murder*****	29.2	70.8	69.7	30.3	51.3	48.7	51.1	48.9
	When undertaken, induced abortion should be kept confidential	60.0	40.0	68.4	31.6	61.5	38.5	63.9	36.1
	Induced abortion must be prohibited *****	23.1	76.9	48.7	51.3	23.1	76.9	33.9	66.1

*Chi-square test, p value comparisons of the groups **The rate of the nursing students agreeing with the statement is low p=0.03, *** The rate of the nursing students agreeing with the statement is high p=0.01, **** The rate of the nursing students agreeing with the statement is high p=0.00, ***** The rate of the nursing students agreeing with the statement is high p=0.00, ***** The rate of the nursing students agreeing with the statement is high p=0.00

Table 3. Logistic regression model explaining statements about attitudes towards induced abortion

Statements about attitudes		R ²	β	Se	OR	p
Positive statements	1. The woman can have an induced abortion in case of unwanted pregnancy Religiosity ref. (Being very religious)	0,19	1.343	0.40	3.82(1.73-8.43)	0.01
	2. The woman can have an induced abortion if her pregnancy risks her health Mother's education ref. (high school or higher education)	0.06	1.12	0.54	3.07(1.05-8.94)	0.03
	3. The mentally-disabled woman can have an induced abortion Religiosity ref. (Being very religious)	0.17	-1.16	0.34	0.31(0.15-0.61)	0.00
	4. The woman can have an induced abortion if the foetus suffers from a serious defect or anomaly The place where one lived the longest ref.(city) Knowledge score ref (knowledge score higher than 9.00)	0.08	-0.99	0.44	0.36(0.15-0.87)	0.02
Negative statements	5. Induced abortion is a sin Father's education ref. (high school or higher education)	0.04	0.95	0.41	2.58(1.14-5.80)	0.02
	6. God gives everybody's sustenance and therefore induced abortion is not necessary Faculty ref. (the School of Health)	0.06	-0.95	0.41	0.38(0.17-0.85)	0.01
	7. The woman must not have an induced abortion under any circumstances Religiosity ref. (being very religious) Mother's employment ref. (employed) Age ref. (older than)	0.12	0.99	0.38	2.68(1.28-5.62)	0.01
	8. Induced abortion is shameful		-1.18	0.53	0.31(0.11-0.87)	0.02
	9. When undertaken, induced abortion should be kept confidential Faculty ref. (the School of Health) Religiosity ref. (being very religious)	0.19	1.18	0.40	3.27(1.38-6.77)	0.00
	10. Induced abortion is murder Religiosity ref. (being very religious)	0.05	-0.81	0.35	0.45(0.22-0.88)	0.02
	11. Induced abortion must be prohibited Religiosity ref. (being very religious) Gender ref (female)	0.13	-0.95	0.44	0.39(0.16-0.92)	0.03
			-1.09	0.48	0.33(0.13-0.85)	0.02

*ref. indicates Reference value

1. Statement of attitude: Independent variables: Faculty, mother's education, mother's employment, religiosity, the place where one lived the longest, knowledge score
2. Statement of attitude: Independent variables: Gender, faculty, mother's education
3. Statement of attitude: Independent variables: Father's education, mother's education, mother's employment, religiosity, the place where one lived the longest, knowledge score
4. Statement of attitude: Independent variables: the place where one lived the longest, knowledge score
5. Statement of attitude: Independent variables: father's education, knowledge score
6. Statement of attitude: Independent variables: Faculty, the place where one lived the longest
7. Statement of attitude: Independent variables: Age, mother's education, religiosity, knowledge score
8. Statement of attitude: Independent variables: Faculty, father's education
9. Statement of attitude: Independent variables: Faculty, father's education, mother's education, mother's employment, religiosity, the place where one lived the longest
10. Statement of attitude: Independent variables: Father's education, religiosity, knowledge score
11. Statement of attitude: Independent variables: Gender, faculty, mother's education, religiosity, knowledge score

The distribution of attitudes towards induced abortion in the medical, nursing and midwifery departments was similar. However, there were differences in the distribution of some attitudes. The statement with which the most students agreed was, "A woman can have an induced abortion if her pregnancy puts her health at risk" (90.6%). Of the medical students, 86.2% agreed with this statement, while 92.1% of the nursing students and 94.9 % of the midwifery students agreed. The statement with which the most students disagreed was "A woman must not have an induced abortion under any circumstances" (73.9%). "Induced abortion is shameful," was the statement with which the highest percentage of medical students disagreed (84.6%). The statements that have got the highest disagree percentage, "A woman must not have an induced abortion under any circumstances," and, "Induced abortion is shameful," were disagreed with by 69.7% of the nursing students. The highest percentage of midwifery students disagreed with the statement, "Induced abortion must be prohibited" (76.9%) (Table 2).

Logistic regression analysis performed to evaluate the effects of the students' characteristics on their attitudes towards induced abortion showed that ten out of fourteen statements about attitudes towards induced abortion were significantly related to at least one characteristic. The list of independent variables found to be significant in single variable analyses before logistic regression analysis is presented in Table 3 . The statement, "Induced abortion is shameful," included in the model as a result of single variable analyses, was not found to be significantly correlated with any variables ($p>0.05$).

The variable that significantly correlated with the highest number of statements about attitudes towards induced abortion was perceived religiosity. Logistic regression analysis showed that positive attitudes towards various items on the inventory for attitudes towards induced abortion were higher for the following groups: females, students who are city dwellers, those who define themselves as less religious, those whose mothers and fathers were high schools graduates or more highly educated, those younger than 23 years old, those whose mothers were employed, medical students and those whose knowledge of induced abortion was higher than the mean ($p<0.05$). Students' income level and family type were not found to be predictive of their attitudes ($p>0.05$, Table 3).

4. DISCUSSION

This study aimed to determine the attitudes of candidates for health professions towards induced abortion and to identify the variables predictive of these attitudes. It found that the students did not have a rigidly negative attitude towards induced abortion and tended to have a positive attitude in cases of medical or social necessity. Increased knowledge of induced abortion also had a positive effect on attitudes, but perceived religiosity had a negative effect on attitudes towards induced abortion.

The highest rate of the students agreed with the statement "A woman can have an induced abortion if her pregnancy puts her health at risk," which is consistent with similar research [10,13,14,18,20,21]. This suggests that the importance of maternal life influences attitudes towards induced abortion. In cases of foetus suffers from a serious defect or anomaly, mentally disabled woman and unwanted pregnancy, the percentage of positive attitudes towards induced abortion were higher than 70%. Similar findings were reported in studies conducted with health students [9,11,13,14,18,20,22]. Although 64% of the students thought that induced abortion is a sin, it was striking that they had a positive attitude in cases of necessity.

Two of the three statements about attitudes towards induced abortion with which the highest percentages of the students agreed are concerned with religious beliefs: "Induced abortion is a sin," and, "God gives everyone sustenance and therefore induced abortion is not necessary." Other striking findings about attitudes were that about two-thirds of the students said induced abortion should be kept confidential, and that half of the students considered induced abortion to be murder. In a study of social work students in the USA, 23.0% of the students reported that induced abortion was a murder, and 14.0% reported that induced abortion should be prohibited [23]. In the study of counsellors, social workers and nursing students found that counsellors and social workers students had a more positive attitude towards abortion than nursing students [24].

Significant differences between nursing, midwifery and medical students were expressed in five items: "A woman can have an induced abortion in case of unwanted pregnancy," "God gives everyone sustenance and therefore

induced abortion is not necessary,” “Induced abortion is shameful,” “Induced abortion is murder,” and, “Induced abortion must be prohibited”. Medical students had the most positive attitude towards induced abortion, followed by midwifery students. Nursing students had the least positive attitude. This can be explained by the fact that nursing students had fewer theoretical courses and less practicum in gynaecology and obstetrics. The studies reported that medical students’ educational background and experiences had a positive influence on their attitudes towards induced abortion [21,25].

Considering the controversial history of induced abortion worldwide, it is clear that there have been differences between belief systems regarding induced abortion. There have been differences in views about induced abortion even in single belief systems [26]. Studies have also revealed that religious beliefs have effects on the attitudes of candidates for health professions [9,11,13,20,21,23,27,28]. In the present study, students who define themselves as more religious had a negative attitude towards induced abortion, but their negative attitudes tended to change to positive in the face of concrete realities (when pregnancy has negative effects on the psychological and social health of women, when pregnancy occurs after a rape, etc.). Respect for human life and not harming others are the main principles of all health professionals and the basic ethical principles of care giving. Therefore, it is important for health professionals to be able to evaluate all the conditions to which individuals are exposed and to have a positive attitude towards requests for induced abortion so that women’s health can be protected and promoted.

In the present study, students with higher scores for knowledge of induced abortion had a more positive attitude towards induced abortion. Although knowledge alone may not be sufficient to change attitudes, it can be considered a principal factor. Individuals’ background knowledge allows them to have a wider perspective in evaluating events and situations, which results in more tolerant and flexible attitudes and these are reflected in actions and behaviour [12]. In this study, the students with a higher degree of knowledge had a more positive attitude as a result of their higher tolerance and flexibility based on their accumulated knowledge. This is a favourable finding. Similar findings reported with students more knowledge about

abortion had a more positive attitude towards induced abortion [21,29].

In this study, the students whose parents were high school graduates or more highly educated had a more positive attitude towards induced abortion. This source of knowledge can change attitudes and is a factor likely to affect attitudes. Parents play an important role in creating and shaping attitudes. Studies have revealed that children’s attitudes towards various events are similar to those of their parents. It has been noted that 50-60% of university students exhibit the same attitudes as their parents, which can be considered evidence for the long-lasting or even lifelong effects of parents on their children’s attitudes [30]. In addition, higher maternal education levels are linked with socio-cultural status, which is known to reduce the conservative effects of religions [31].

It is the limitations of the research that one third of the students have insufficient knowledge about abortion.

5. CONCLUSION

In view of the results of this study, it is obvious that these candidates for health professions generally had a positive attitude towards induced abortion. It seems that these students will be able to be flexible and prioritise their patients’ circumstances rather than their own beliefs. However, one-third of the students turned out to have little knowledge of induced abortion. Therefore, medical, nursing and midwifery curricula should emphasise induced abortion. Occupational and ethical values and opportunities to discuss the religious aspects of induced abortion should be created. Mothers, who play an important role in children’s development, should be provided with better educational opportunities, and qualitative studies on induced abortion should be conducted.

CONSENT

It is not applicable.

ETHICAL APPROVAL

Ethical approval was obtained from the Ethics Committee of the Dean of the Faculty of Medicine of Celal Bayar University.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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