

KNOWLEDGE AND ATTITUDE AMONG WOMEN OF REPRODUCTIVE AGE ABOUT
INDUCED ABORTIONS IN BAGHDAD / AL-KARKH

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ABSTRACT

Background: Induced abortion is defined as the intentional medical or surgical termination of a pregnancy before the end of gestation. It may be performed electively, by a woman's decision, or therapeutically, due to maternal or fetal health indications. This definition distinguishes it from spontaneous abortion miscarriage, which occurs without intentional intervention. **Patients and Methods:** A cross-sectional study was conducted among 300 women using a direct interview question. The study was carried out during a period of six months from 1st of February 2025 to 31st of July 2025. It included a convenient sample from outpatients of Obstetrics and Gynecology clinics of three governmental hospitals in the Al-Karkh sector in Baghdad (Al-Imammein Al-Kadhmein medical city in Baghdad, Al-Yarmouk Teaching Hospital and Abu Ghraib General Hospital Baghdad). The study included Iraqi married women aged 15-49 years who agreed to participate in the study. The questionnaire included items related to socio-demographic data, knowledge, and attitude towards induced abortion. **Results:** The study revealed that (65.0%) of participants had acceptable knowledge about induced abortion, (19.0%) had good knowledge, and (16.0%) had poor knowledge. Most had heard about abortion (92.0%), mainly through family/relatives (50.4%) and media (34.4%). Common perceived reasons for abortion were fetal malformations (71.3%) and unwanted pregnancy (69.3%). Awareness of complications such as bleeding (90.3%) and uterine rupture (80.7%) was high. Regarding attitude (54.0%) showed a poor attitude, and (46.0%) had an acceptable attitude. Only (31.7%) supported legal abortion, and (22.3%) believed a woman has the right to choose abortion. Significant associations were found between knowledge and variables like age, education, occupation, income, and residence ($P < 0.05$). Similarly, attitude was significantly associated with marital status ($P = 0.003$) and number of family members ($P = 0.002$). **Conclusions:** Most participants had acceptable knowledge but a poor attitude toward induced abortion. There was significant association between knowledge and young age woman, marital status, higher education, government employment, sufficient income, family members and urban residence. There were significant association between attitude and marital status and family members. Awareness programs are needed to improve attitudes and empower women to make informed reproductive health decisions.

INTRODUCTION

Abortion refers to ending a pregnancy before the fetus can survive outside the uterus, which is defined by the WHO as before 20 weeks of gestation or in some cases before 28 weeks. This can happen naturally or be medically or surgically induced in specific situations.^[1]

An induced abortion is the intentional ending of a pregnancy through specific procedures designed to remove or expel the embryo or fetus.^[2]

Induced abortion is defined as the intentional medical or surgical termination of a pregnancy before the end of gestation. It may be performed electively, by a woman's decision, or therapeutically, due to maternal or fetal health indications. This definition distinguishes it from spontaneous abortion miscarriage, which occurs without intentional intervention.^[3]

Approximately 205 million pregnancies occur worldwide each year. Over one-third of them are unplanned, and

nearly one-fifth result in induced abortion. The majority of abortions stem from unintended pregnancies.^[4]

Around 73 million induced abortions take place worldwide each year. Six out of 10 (61%) of all unintended pregnancies, and 3 out of 10 (29%) of all pregnancies end in induced abortion.^[5]

Maternal mortality represents a major global health challenge, with an estimated 303,000 deaths occurring annually during pregnancy, childbirth, and the postpartum period. The majority of these deaths take place in developing countries, making the prevention and reduction of maternal mortality a critical priority in global public health.^[6]

There are multiple ways to intentionally end a pregnancy. The method chosen typically depends on the developmental stage of the embryo or fetus, as its size increases over time. Legal restrictions, regional availability, and the preferences of the doctor or patient can also play a role in determining the procedure used.^[7]

A pregnancy can be legally terminated, such as through medical abortion, if it poses a risk to the woman's life. In contrast, unsafe abortions often take place in areas where abortion is restricted or banned.^[8]

Complications of unsafe abortion cause between 50,000 and 100,000 women's deaths annually.^[9]

Beyond its serious health risks, induced abortion also imposes a significant financial burden, particularly in low-income countries where healthcare systems are already strained. Expenses include medical staff, necessary medications, blood transfusions, medical supplies, equipment, and hospital stays.^{[10][11]}

This study aims to assess knowledge and Attitude of women child bearing age about induced abortions in Baghdad/ Al-Karkh health sector and to determine the association socio-demographic characteristics with knowledge and Attitude.

METHODOLOGY

Study setting and design

This cross sectional study was conducted from 1st of February 2025 to 31 of July 2025. The study included a convenient sample of 300 Iraqi married women from outpatients of Obstetrics and Gynaecology clinics of three governmental hospitals in Al-Karkh sector (Al-Imammein Al-Kadhmein medical city in Baghdad, Al-Yarmouk Teaching Hospital and Abu Ghraib General Hospital Baghdad). **Inclusion criteria** were Iraqi married women. Age ranged (15-49) years who agreed to participate in the study. Any women who not married before, also any women less than 15 years or more than 49 years was excluded.

Ethical considerations

Formal approvals were obtained from scientific committee of Arab board of health & specializations. Then an official permission was obtained from the directorate of health of Baghdad. Verbal consent was taken from all participants after explaining the aim of the study and only those who were willing to participate in the study were included.

Data collection tools

Data was collected through direct interview with all married women child bearing age to complete the data included in questionnaire.^{[3][12][13][14]} The applied questionnaire consisted of four parts specially designed written structured questionnaire by the researcher and modified by supervisors and specialized community medicine and specialized family medicine and translated to the Arabic language by researcher.

First part consisted of socio-demographic data of the participants (Age, marital status, family income, family size, chronic disease, religion, residency (urban, rural), education level and job).

Second part included items concerning abortion and obstetric history of the participants (previous pregnancy, history of abortion, history of unwanted pregnancy, place of abortion, use of contraception, type of contraception, use of family planning).

Third part was concerned with assessment of knowledge about induced abortion in included participants (13 questions: first 2 questions about definitions, next 3 questions about the causes of Induced abortion, next 4 questions about complications of Induced abortion, next 1 question about if it is legal in Iraq, fourth 2 questions about the decision of abortion, the last one question about induced abortion if it is halal before 3 months or not).

Fourth part included attitude about induced abortion included participants (five questions).

Statistical Analysis

Data were coded, entered, and analyzed using IBM SPSS version 29. The Descriptive statistics were used: frequency, percentage, mean, standard deviation, and range. Chi-square test was applied for differences in proportions (qualitative variables). Student's t-test was used to compare means between two independent groups. ANOVA was used to compare means among more than two groups. A p-value ≤ 0.05 was considered as determination point for significance For Knowledge sections, 11 questions, the questions were answered by Yes, no or not sure. Answers were scored as following: correct answers (1), incorrect answer (-1) and not sure (0). The women knowledge was considered.

- Good: ≥ 9 or $\geq (75\%)$
- Acceptable: 6 – 8 or $(50\% \text{ _} 74\%)$
- Poor: ≤ 5 or $\leq (50\%)$

- For attitude 6 questions, the questions were answered by Yes, no or not sure. Answers were scored as following: correct answers (1), incorrect (-1) answer and not sure (0).
- Good: 6 or $\geq$ (75%)
- Acceptable: 4–5 or (50% _74%)
- Poor: ≤ 3 or $\leq$ (50%)

RESULTS

Basic sociodemographic characteristics are illustrated in Table (1).

Table (1): Distribution of studied group according to socio-demographic characteristics.

Socio demographic characteristics		No. (300)	%
Age (years)	15_20 years	3	1.0
	20---24	21	7.0
	25---29	108	36.0
	30---34	95	31.7
	35---39	49	16.3
	=>40years	24	8.0
	Mean $\pm$ SD (Range)	30.9 $\pm$ 5.4 (18-46)	
Marital status	Married	247	82.3
	Divorced	42	14.0
	Widowed	11	3.7
Education	Illiterate	9	3.0
	Read & Write	39	13.0
	Elementary	71	23.7
	High school	101	33.7
	University	80	26.7
Occupation	Government sector	142	47.3
	Private sector	26	8.7
	Housewife	126	42.0
	Retired	6	2.0
Average monthly income	Enough	196	65.3
	Not enough	104	34.7
Number of family members	2	7	2.3
	3	78	26.0
	4	78	26.0
	5&More	137	45.7
	Mean $\pm$ SD (Range)	4.5 $\pm$ 1.3 (2-8)	
Religion	Muslim	279	93.0
	Christian	21	7.0
	Mandaeen	-	-
Residence	Urban	277	92.3
	Rural	23	7.7

Figure (1) shows that 45 women (15.0%) had chronic diseases. Hypertension was reported in 17 cases (5.7%), diabetes mellitus in 20 (6.7%), hypothyroidism in 3 (1.0%), hyperthyroidism in 4 (1.3%), and systemic lupus erythematosus (SLE) in 6 women (2.0%).

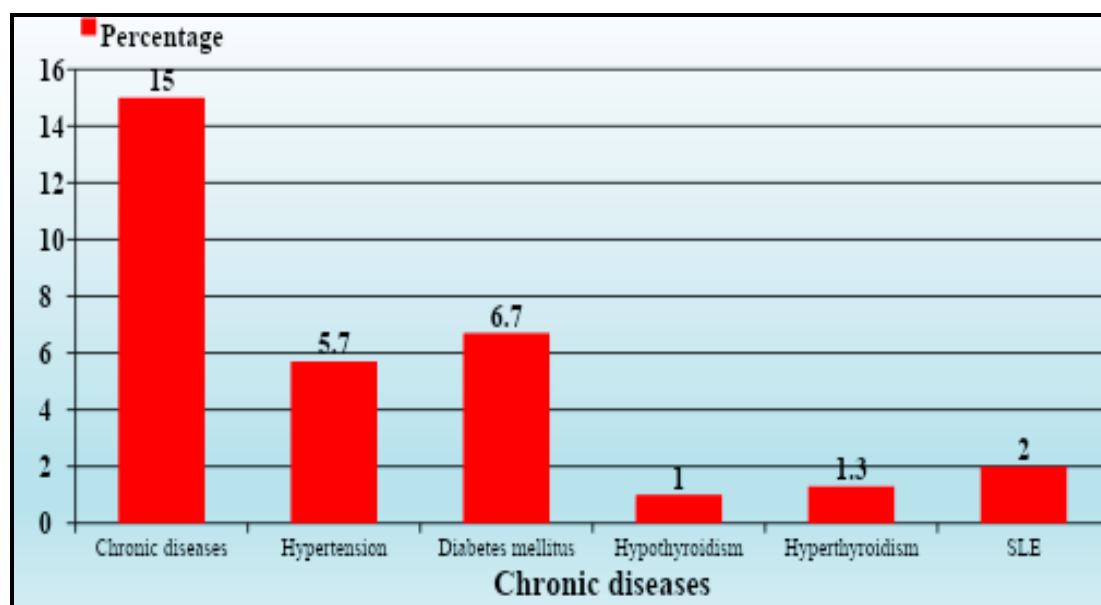


Figure (1): Distribution of studied group according to chronic diseases.

Abortion & Gynecological history

Table 2 indicates that out of 300 women, 286 (95.3%) had been pregnant before, with 108 (36.0%) experiencing unwanted pregnancies and 78 (26.0%) having miscarriages. A majority preferred having an abortion in a hospital setting (268, 89.3%), while 15 (5.0%) opted for home and 17 (5.7%) for midwives. In response to potential unwanted pregnancies, 211 (70.3%)

would carry on with the pregnancy, 18 (6.0%) would terminate, and 71 (23.7%) were uncertain. Contraceptive use was reported by 176 (58.7%), predominantly oral pills (78, 44.3%) and condoms (35, 19.9%). Among those not using contraception, 57 (46.0%) feared side effects and 36 (29.0%) disliked them. Current family planning usage stood at 178 (59.3%).

Table (2): The distribution of studied group according to abortion & obstetric history.

Abortion and obstetric history		No.	%
1-Had ever been pregnant		286	95.3
2-Ever had an unwanted pregnancy		108	36.0
3-Ever had a miscarriage (Pregnancy was terminated before 28 weeks)		78	26.0
4-Where do prefer the place of abortion	Home	15	5.0
	Hospital	268	89.3
	Midwife	17	5.7
5-If have an unwanted pregnancy at any time, what to do	Keep getting pregnant & give birth	211	70.3
	Terminate the pregnancy	18	6.0
	Not sure	71	23.7
6-Use contraceptive	Yes	176	58.7
	No	124	41.3
The kind of contraception used	Oral contraceptive pills	78	44.3
	Condoms	35	19.9
	Injections	12	6.8
	IUCD	21	11.9
	Implant	-	-
	Coitus interruptus	30	17.0
The reason for not using contraception	Do not like them	36	29.0
	Partner view	28	22.6
	Do not know how to use it	3	2.4
	Fear of side effect	57	46.0
7-Currently use family planning	Yes	178	59.3
	No	122	40.7

Knowledge about induced abortion

Figure (2) shows that 276 women (92.0%) had heard about induced abortion. The main source of information

was family/relatives followed by media [139 (50.4%), 95 (34.4%)]. Most believed abortion might be done for fetal malformations and unwanted pregnancy then Financial

reasons [214 (71.3%), 208 (69.3%), 172 (57.3%)]. Awareness of complications was high, they knew about bleeding and about uterine rupture, and mentioned infertility or death [271 (90.3%), 242 (80.7%), 189 (63.0%)]. Only 57 (19.0%) believed abortion is legally

allowed in Iraq, and 174 (58.0%) thought the doctor decides while 123 (41.0%) believed the woman decides. About 114 (38.0%) believed abortion before 3 months might be Halal.

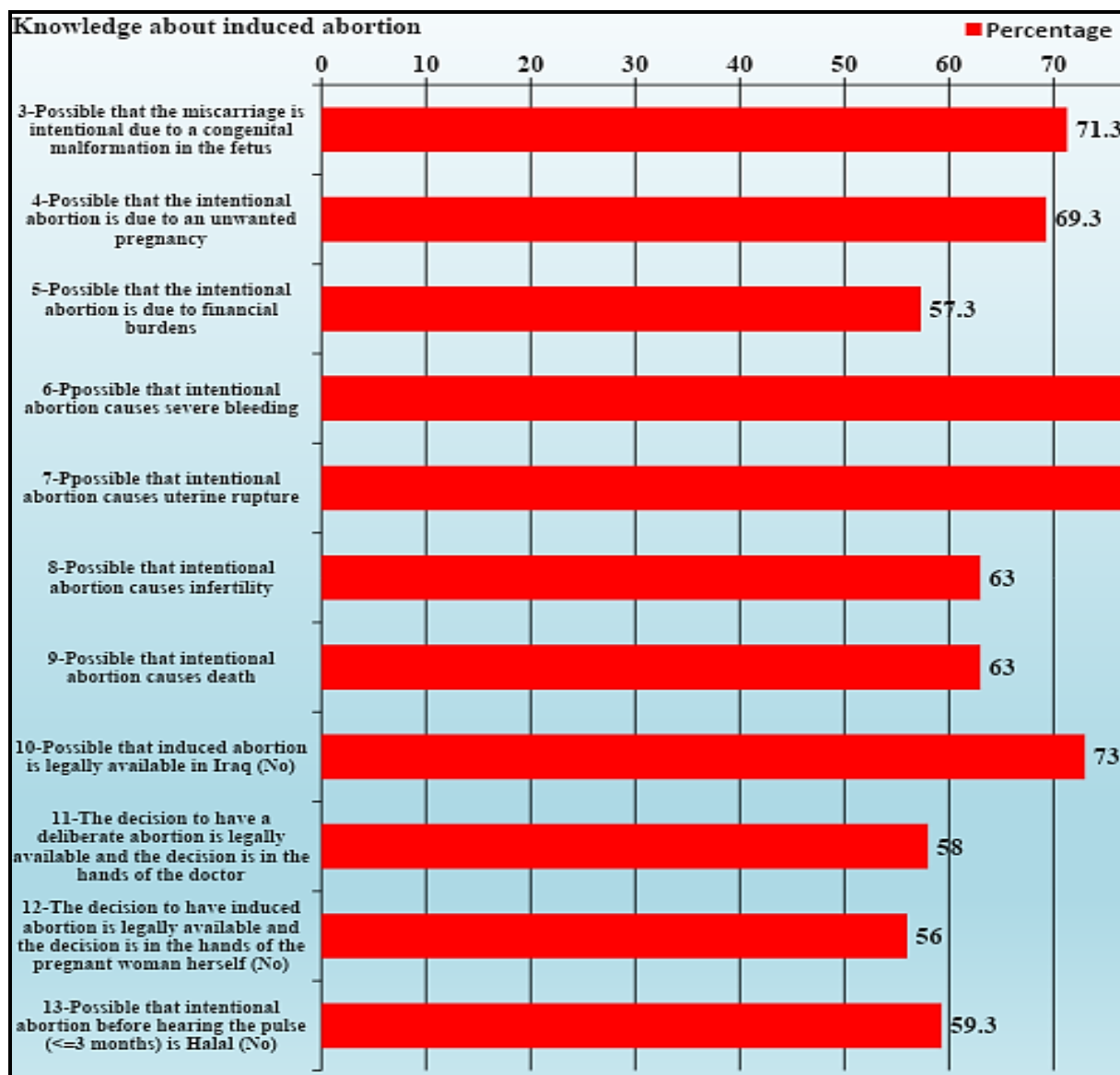


Figure (2): Knowledge score among participants.

Figure (3) this figure shows that 276 women (92%) heard about induced abortion while 21 women (7%) had not heard about it but Only 3 women (or 1%) they were not sure if they had heard about it or not.

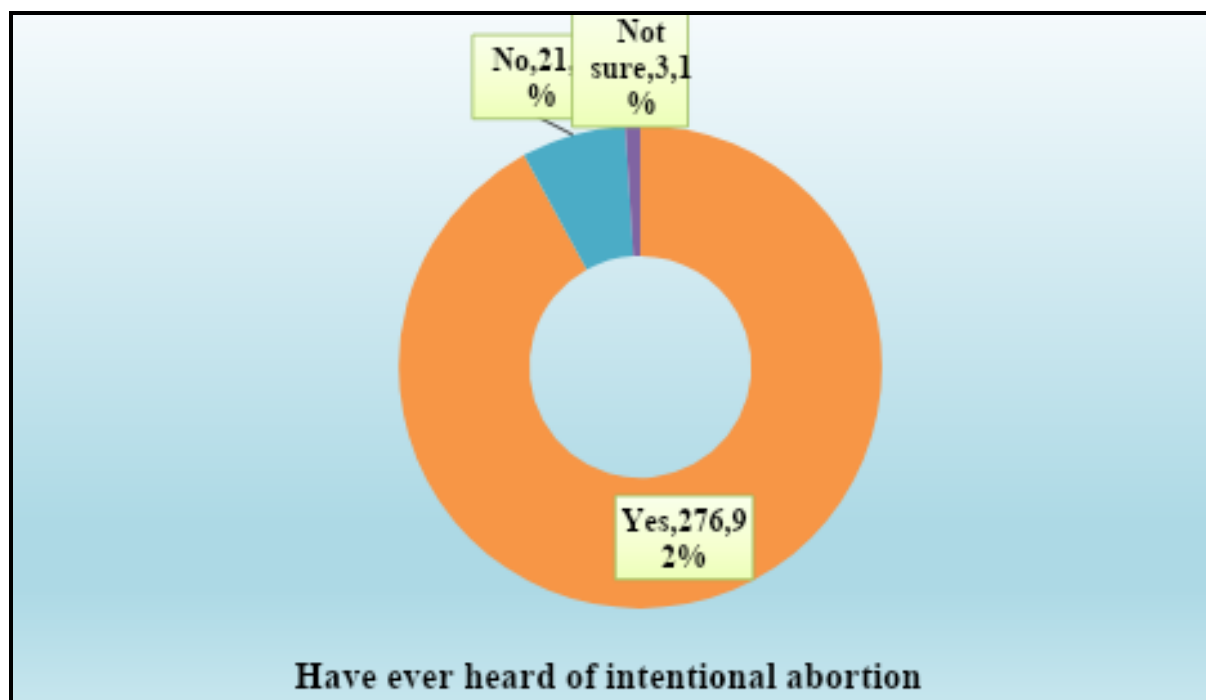


Figure (3): Distribution of participants regarding their hearing about induced abortion.

Attitude towards induced abortion

Figure (4) shows that Only 31.7% of women supported abortion legalization, while 85.3% believed it would be used if legal. Only 7.0% would use it themselves, and

22.3% supported a woman's right to choose. Additionally, 43.0% thought contraception was ineffective, and 3.0% agreed abortion should be unrestricted.

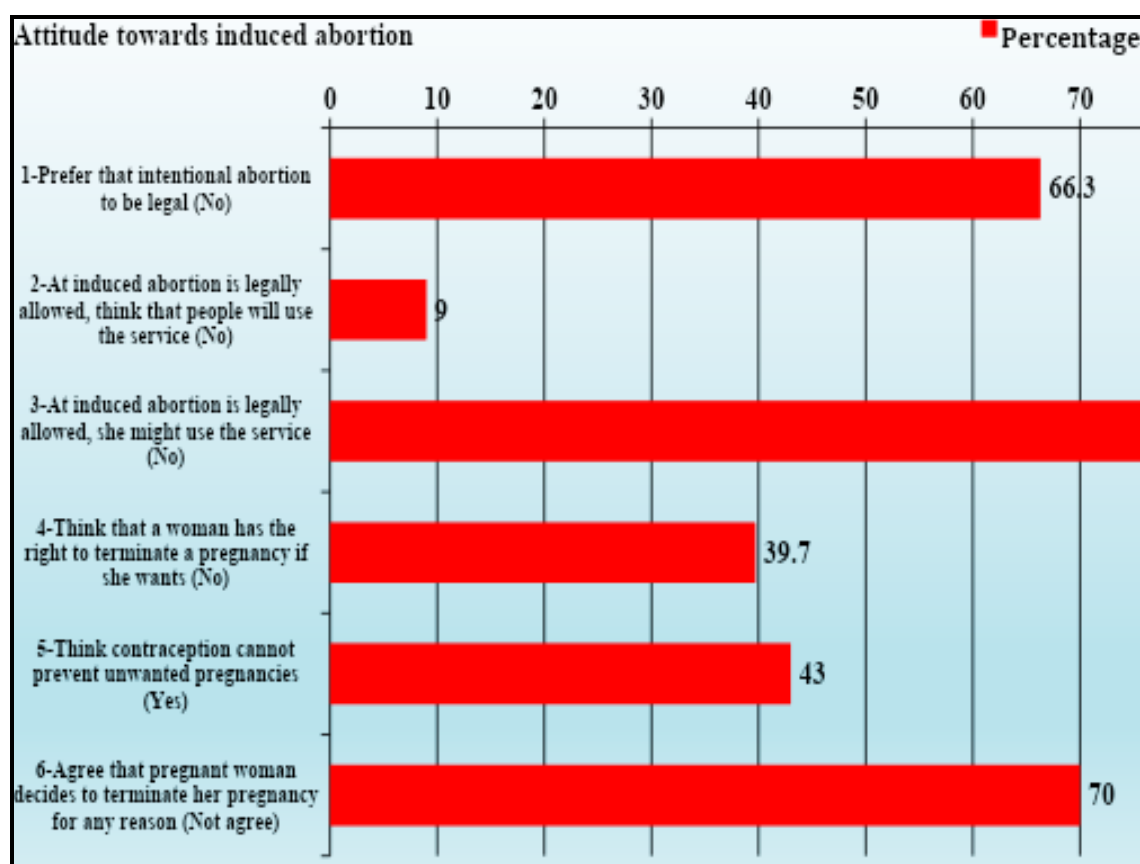


Figure (4): Attitude score about induced abortion.

Knowledge and Attitude score classification

Figure (5) shows that knowledge levels about induced abortion:

acceptable knowledge in most women 195 (65.0%), **good knowledge** was represented by 57 (19.0%), **Poor knowledge** was only in 48 (16.0%).



Figure (5): Knowledge score in included participants.

Figure (6) shows the attitude towards induced abortion.

Poor attitude **represented by 162 women (54.0%)**, Acceptable attitude **was represented by 138 (46.0%)**, No participants had a “good” score.

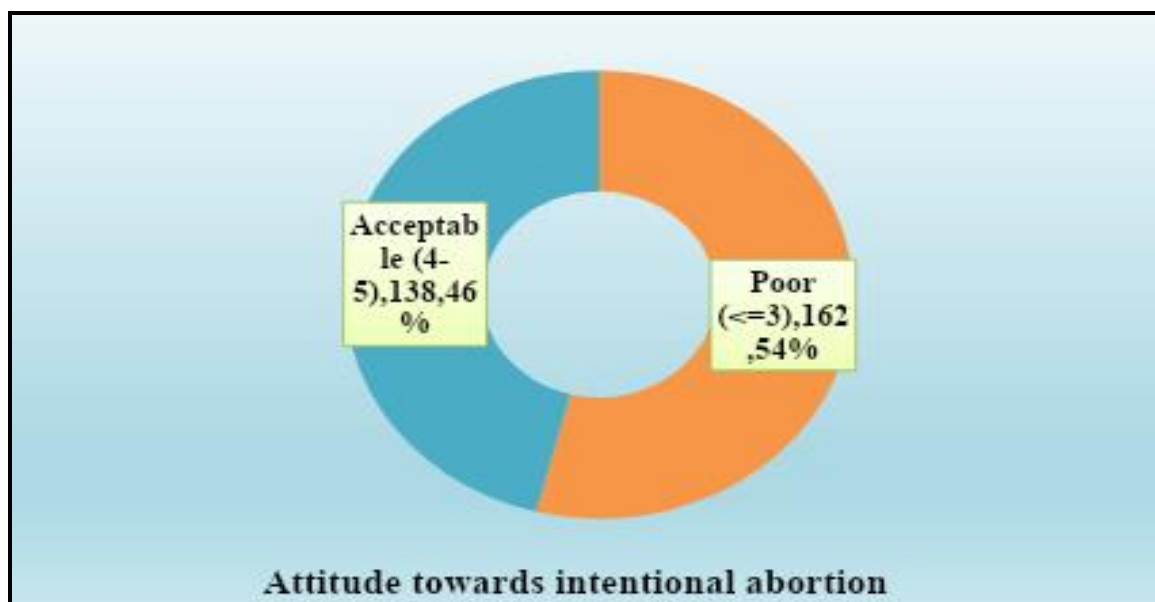


Figure (6): Attitude score in included participants.

Associations between socio-demographic characteristics and knowledge

Table (3) shows significant associations between knowledge level and different variables such as {age, marital status, education, occupation, income, religion,

residence, and number of family members} ($P < 0.05$). Higher knowledge was associated with younger age groups, higher education, government employment, sufficient income, and urban residence.

Table (3): Association between socio-demographic data and knowledge.

Socio demographic characteristics		Knowledge about intentional abortion						P value
		Poor (≤5)		Acceptable (6-8)		Good (≥9)		
		No.	%	No.	%	No.	%	
Age (years)	<20years	3	6.3	-	-	-	-	0.0001*
	20---24	3	6.3	18	9.2	-	-	
	25---29	16	33.3	69	35.4	23	40.4	
	30---34	14	29.2	50	25.6	31	54.4	
	35---39	9	18.8	37	19.0	3	5.3	
	=>40years	3	6.3	21	10.8	-	-	
	Mean±SD	30.1±5.8		31.2±5.8		30.7±3.5		0.402
Marital status	Married	40	83.3	153	78.5	54	94.7	0.001*
	Divorced	3	6.3	36	18.5	3	5.3	
	Widowed	5	10.4	6	3.1	-	-	
Education	Illiterate	-	-	9	4.6	-	-	0.0001*
	Read & Write	12	25.0	21	10.8	6	10.5	
	Elementary	8	16.7	60	30.8	3	5.3	
	High school	14	29.2	60	30.8	27	47.4	
	University	14	29.2	45	23.1	21	36.8	
Occupation	Government sector	22	45.8	75	38.5	45	78.9	0.0001*
	Private sector	11	22.9	15	7.7	-	-	
	Housewife	15	31.3	99	50.8	12	21.1	
	Retired	-	-	6	3.1	-	-	
Average monthly income	Sufficient	25	52.1	120	61.5	51	89.5	0.0001*
	Not enough	23	47.9	75	38.5	6	10.5	
Number of family members	2	4	8.3	-	-	3	5.3	0.001*
	3	15	31.3	42	21.5	21	36.8	
	4	9	18.8	54	27.7	15	26.3	
	5& More	20	41.7	99	50.8	18	31.6	
	Mean±SD	4.3±1.5		4.7±1.3		3.9±1.0		0.0001^
Religion	Muslim	39	81.3	183	93.8	57	100	0.001*
	Christian	9	18.8	12	6.2	-	-	
Residence	Urban	40	83.3	186	95.4	51	89.5	0.013*
	Rural	8	16.7	9	4.6	6	10.5	
*Significant difference between percentages using Pearson Chi-square test (χ ² -test) at 0.05 level.								

*Significant difference between percentages using Pearson Chi-square test (χ^2 -test) at 0.05 level.

Association between attitude and socio-demographic factors:

Table (4) assessment of association between attitude and socio-demographic factors revealed significant associations with marital status and number of family

members. Married women and those from smaller families had more accepting attitudes toward intentional abortion. Other variables showed no significant association.

Table (4): Association between socio-demographic data and attitude.

4). Association between socio-demographic data and attitude.

Socio demographic characteristics		Attitude towards intentional abortion				P value
		Poor (≤ 3)		Acceptable (4-5)		
		No.	%	No.	%	
Age (years)	<20years	3	1.9	-	-	0.181
	20---24	9	5.6	12	8.7	
	25---29	63	38.9	45	32.6	
	30---34	44	27.2	51	37.0	
	35---39	28	17.3	21	15.2	
	=>40years	15	9.3	9	6.5	
	Mean±SD	31.1±5.5		30.8±5.3		0.656
Marital status	Married	133	82.1	114	82.6	0.003*
	Divorced	18	11.1	24	17.4	

	Widowed	11	6.8	-	-	
Education	Illiterate	6	3.7	3	2.2	0.098
	Read & Write	18	11.1	21	15.2	
	Elementary	35	21.6	36	26.1	
	High school	50	30.9	51	37.0	
	University	53	32.7	27	19.6	
Occupation	Government sector	88	54.3	54	39.1	0.056
	Private sector	14	8.6	12	8.7	
	Housewife	57	35.2	69	50.0	
	Retired	3	1.9	3	2.2	
Average monthly income	Sufficient	100	61.7	96	69.6	0.155
	Not enough	62	38.3	42	30.4	
Number of family members	2	7	4.3	-	-	0.002*
	3	51	31.5	27	19.6	
	4	33	20.4	45	32.6	
	5& More	71	43.8	66	47.8	
	Mean±SD	4.3±1.3		4.7±1.3		0.011#
Religion	Muslim	150	92.6	129	93.5	0.764
	Christian	12	7.4	9	6.5	
Residence	Urban	151	93.2	126	91.3	0.536
	Rural	11	6.8	12	8.7	
*Significant difference between percentages using Pearson Chi-square test(χ^2 -test) at 0.05 level.						

DISCUSSION

Regarding Knowledge about Induced Abortion In current study (92%) women had heard about induced abortion. This finding disagrees with the study done by **Bohsas et al. in Syria (2023)**^[3], where only 26% had heard about it, nor with the study done by **Gutema and Dina in Ethiopia (2022)**^[14] where (47.1%) had heard about it, nor with a study conducted by **Saeed ET al. in Afghanistan. (2022)**^[13] Where (41.5%) had heard about safe abortion methods.

The higher awareness in Iraq may be related to more open discussions within families, better health education, and possibly more exposure to social and health topics.

In our study, congenital malformation was considered a reason for induced abortion by (71.3%) of participants which, higher with the study done by **Gutema and Dina. in Ethiopia (2022)**^[14] (55.8%).

While unwanted pregnancy was accepted by (69.3%) of Iraqi women in our study, disagreed with the study done by **Gutema and Dina. in Ethiopia (2022)**^[14] (36.9%).

Regarding the knowledge about abortion complications (90.3%) of women in our study knew about them. In study done by **Bohsas et al. in Syria (2023)**^[3] only (40.2%) of women had this knowledge, in study done by **Gutema and Dina. in Ethiopia (2022)**^[14] only (17.6%) mentioned heavy bleeding as a complication.

Concerning legal knowledge (19%) of women in our study believed that abortion is legal. This was lower than

the (63.9%) reported in study done by **Gutema and Dina. in Ethiopia (2022)**^[14] and the (37.1%) reported in the study done by **Blushinova et al. in Kazakhstan. (2024)**^[12], but higher than the (6.9%) reported in in study done by **Bohsas et al. in Syria (2023)**^[3], so our results disagree with all studies but agree with the study done by **Saeed et al. in Afghanistan. (2022)**^[13] (13.6%) believed that abortion is legal.

As regards overall knowledge included participants, (19%) had good knowledge about induced abortion, (65%) had acceptable knowledge, while only (16%) had poor knowledge. This finding indicates that most of participants in our study had a moderate to good level of knowledge. While we found **disagreeing** with studies done by **Gutema and Dina. in Ethiopia (2022)**^[14], **Bohsas et al. in Syria (2023)**^[3] and **Saeed et al. in Afghanistan. (2022)**^[13] Which had predominantly poor knowledge levels (72.9%, 65.3%, 70% and respectively). This gap may be explained by differences in education, healthcare access, and exposure to reproductive health information, especially in urban areas like Baghdad. On the other hand, a study conducted by **Blushinova et al. in Kazakhstan (2024)**^[12] reported that over (84%) of participants demonstrated good knowledge, which disagree with the current study's findings, as our participants had a lower level of knowledge.

Regarding association between knowledge and socio-demographic data in our study, there was a significant association between age and knowledge ($p = 0.0001$), where the highest knowledge was among women aged

30-34 years. The comparison in the study done by **Gutema and Dina. in Ethiopia(2022)**^[14] the association between knowledge and age was significant ($p = 0.002$), but the highest knowledge was among women aged 21-23 years because the Ethiopian study focused on university students so our study agreed with Ethiopia in significance.

In **our study**, married women had the highest knowledge (p value= 0.001). In the study done by **Bohsas et al. in Syria (2023)**^[3] and **Gutema and Dina. in Ethiopia (2022)**^[14], marital status was significant p value (0.005, 0.004) but married women were less likely to have good knowledge compared to single women so This disagreement in marital status may be because married women in Iraq often have more interaction with family, healthcare providers, and social discussions related to pregnancy and abortion.

In all studies, higher education was significantly associated with better knowledge. In our study, university-educated women had the highest knowledge ($p = 0.0001$). In study done by **Gutema and Dina. in Ethiopia (2022)**^[14] students with better-educated parents had better knowledge. In a study conducted by **Saeed et al. in Afghanistan. (2022)**^[13] university-educated women had the highest knowledge ($p < 0.001$).

In our study, government employees had the highest knowledge ($p = 0.0001$). In, **Gutema and Dina. in Ethiopia (2022)**^[14] occupation was significant through the mother's employment this shows agreement in our study but disagreed with the study conducted by **Saeed et al. in Afghanistan. (2022)**^[13] occupation was not significant although employed women.

In our study, women with sufficient income had the highest knowledge ($p = 0.0001$). In **Gutema and Dina in Ethiopia (2022)**^[14] higher family income was significantly associated with better knowledge ($p = 0.004$). In study conducted by **Saeed et al. in Afghanistan (2022)**^[13] Higher income was also significantly associated ($p < 0.001$).

In our study, urban women had the highest knowledge ($p = 0.013$). In **Gutema and Dina in Ethiopia (2022)**^[14] urban students had better knowledge ($p = 0.002$). This shows agreement with Ethiopia, likely because urban areas offer better health resources and information.

In our study, smaller family sizes were significantly associated with higher knowledge ($p = 0.0001$) of participants had 3 family members who had the highest knowledge. In the study done by **Bohsas et al. in Syria (2023)**^[3] family size was not significantly associated ($p = 0.063$). This shows a disagreement. The reason may be that in Iraq, smaller family size reflects modern urban living, while in Syria family size may have less influence due to war conditions.

Regarding attitude about induced abortion in **our study** was included participants only (31.7%) in our study preferred legalization, which lower than in study done by **Bohsas et al. in Syria (2023)**^[3], and **Blushinova et al. in Kazakhstan (2024)**^[12] **And Saeed et al. in Afghanistan (2022)**^[13] (49.5%, 55.8%, 58.0%) respectively.

In **our study** (85.3%) of participants believed that people would use abortion services if legalized, which agrees with study done by **Bohsas et al. in Syria (2023)**^[3], **Gutema and Dina in Ethiopia (2022)**^[14] (83.7%, 92.6%) respectively.

Additionally, only (7.0%) of our participants would personally use abortion services if legalized, which disagrees with study conducted by **Saeed et al. in Afghanistan (2022)**^[13] (40.8%) and strongly disagrees with study conducted by **Gutema and Dina in Ethiopia (2022)**^[14] would personally use abortion services if legalized (95.4%). The very low acceptance in our study may be due to fear of social stigma and deep-rooted religious prohibitions, while higher rates in the other countries may reflect more individual freedom and greater exposure to abortion services.

Furthermore (22.3%) of **our participants** believed that women have the right to terminate pregnancy, which disagrees with **Gutema and Dina in Ethiopia (2022)**^[14] (59.7%) and **Blushinova et al. in Kazakhstan. (2024)**^[12] (66.7%) believed that women have the right to terminate pregnancy. The higher support in these countries may be related to their more liberal abortion laws and broader reproductive health awareness.

Finally, only (3.0%) in **our study** agreed that abortion can be done for any reason, which disagrees with **Bohsas et al. in Syria (2023)**^[3] and **Blushinova et al. in Kazakhstan. (2024)**^[12] (23.6%, 27.5%) respectively.

In **our study**, the overall attitude towards induced abortion was generally conservative with (46%) of women showing an acceptable attitude and (54%) having a poor attitude. When compared to other studies, the study done by **Bohsas et al. in Syria (2023)**^[3] showed an acceptable attitude rate of (49.5%) which is nearly similar to our findings and can be considered in agreement with our results.

In **our study**, there was significant association between attitude and marital status ($p = 0.003$), where married women represented those with an accepting attitude. This agrees with the study conducted by **Bohsas et al. in Syria (2023)**^[3] where marital status was also significantly associated ($p = 0.035$), where married women were more likely to have a positive attitude than single women.

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