



## The Rise of Liberal Attitudes Toward Abortion in Iran

<sup>1,2\*</sup> **Hatam Hosseini, <sup>1</sup> Milad Bagi**

<sup>1</sup> Department of Social Sciences, Faculty of Economics and Social Sciences, Bu-Ali Sina University, Hamedan, Iran

<sup>2</sup> Department of Sociology, Faculty of Arts and Science, Nipissing University, Ontario, Canada

\*Corresponding Author's e-mail: [h-hosseini@basu.ac.ir](mailto:h-hosseini@basu.ac.ir)

Accepted: June 2024. Published: February 2025

### Abstract

In Iran, abortion is illegal and only permitted under certain circumstances. This article aims to examine changes in attitudes toward abortion and their correlates over the past two decades, using data from the 2000, 2005, and 2020 Iran World Values Survey (WVS). The results show that over the past two decades, approval of abortion has increased, with recent Iranian birth cohorts having a more positive attitude toward abortion compared to older generations. Multivariate results indicate that people with lower religiosity and more positive attitudes toward gender equality and modern family values hold more favorable views on abortion. Given the growth of liberal attitudes toward abortion, a rising trend in its incidence in Iran is expected. Therefore, the government must consider revising the legality of abortion to avert health risks for women seeking the procedure.

**Key Words:** Unwanted Pregnancy, Childbearing, Induced Abortion, Maternal Mortality, Family Planning, Iran

**How to cite:** Hosseini, H., & Bagi, M. (2025). The Rise of Liberal Attitudes Toward Abortion in Iran. *International Journal of Population Issues*, 2(1), 1-13. <https://doi.org/10.36312/ijpi.v2i1.1938>



<https://doi.org/10.36312/ijpi.v2i1.1938>

Copyright©2024, Hosseini & Bagi.

This is an open-access article under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) License.



## INTRODUCTION

Annually millions of women around the world become pregnant unintentionally. The global annual rate of unintended pregnancy in 2015-19 was 64 unintended pregnancies per 1000 women aged 15-64 years. Among all pregnancies, 48 percent were unintended (Bearak et al. 2020: 1155).

Unintended pregnancy is the main reason for women to have an induced abortion. Induced abortion is common across the globe (Singh et al. 2017: 6). Worldwide, the demand for abortion is probably dropping (Weeks 2016). However, Bongaarts and Westoff (2000) and Marston and Cleland (2003) consider abortion as the most common procedure used to prevent unintended pregnancies in the absence or failure of contraceptive methods. Globally, there are 73.3 million abortions annually on average, which corresponds to a global annual rate of 39 abortions per 1000 women aged 15-49 years. According to these estimates, 61 percent of unintended pregnancies end in abortion (Bearak et al. 2020: 1157).

Induced abortion is associated with maternal morbidities and mortality. Worldwide, 4.7 to 13.2 percent of maternal deaths can be attributed to unsafe abortion (Say et al. 2014). Estimates (Ganatra et al. 2017) showed that during 2010-2014 around 45 percent of all abortions were unsafe, which mostly occurred in developing countries.

Abortion laws vary considerably between countries and have changed over time. They range from abortion being freely available on request, to regulated abortions and outright prohibition in all circumstances (Singh et al. 2017). There is more concern about women in developing regions. In countries such as Iran, where there are social, religious, and legal sensitivities about abortion (Aghayari Hir and Mehryar 2007: 62), not only reliable data and accurate information are not available about it (Erfani 2016; Hosseini, Erfani, and Nojomi 2017), but it is also taboo to discuss abortion (Abdollahyan and Fallah 2008: 69). In these countries, women who experience unwanted pregnancy have to abort the fetus mostly in an unhealthy environment and under the supervision of unskilled people (WHO 2012). Therefore, it is difficult to know the role of abortion in population changes and reproductive health planning.

Over the past two decades, the total fertility rate has remained below the replacement level in Iran (Erfani 2019) and women have low fertility intention (Erfani, 2017). A recent Iranian study shows that the average ideal number of children for women is less than two children, and 44 percent of married women under the age 36 wanted to stop childbearing (Erfani and Hosseini 2019). Results from another study (Hosseini, Erfani, and Nojomi 2017: 283) indicates that about 14 percent of women of reproductive age reported unwanted pregnancy in their last birth.

In order to prevent the continuation of low fertility, the government placed severe limitations on the provision of free family planning services, which has affected women in low socioeconomic groups in Iran (Erfani, 2015). Moreover, this limitation forces women with unwanted pregnancies to use clandestine, unsafe abortion, which can escalate maternal mortality and morbidity rates (Hosseini, Erfani, Nojomi 2017: 282). It is estimated that about 9 percent of pregnancies in Tehran lead to abortion, and the proportion of abortions for non-medical reasons has increased from 69 percent in 2009 to 82 percent in 2014 (Erfani, 2016; Erfani and Shojaei 2018: 69). In the other city of Iran, Hamedan, 3.8 percent of respondents reported having had an induced abortion in their life (Hosseini, Erfani, and Nojomi 2017: 283).

In the context in which abortion data are limited, understanding the view of Iranians toward abortion is of great importance, since attitude is known as the key proximate determinant of intention to a behavior (Ajzen & Fishbein, 1980). Therefore, this study aims to examine changes in attitudes toward abortion in Iran over the past two decades and investigate sociocultural factors associated with abortion attitudes. The results of this study can provide important information about individual's attitudes toward abortion and its changes over time, which inform population policymakers about people's attitudes toward abortion, as a basis for revising the existing reproductive and health programs to improve women's health status.

## **METHOD**

### **Data**

This study used data from the World Values Survey (WVS), which has been conducted in seven waves among several countries, including Iran (Inglehart et al., 2014). The Iran WVS was conducted in three waves of 2000, 2005, and 2020 in Iran, allowing us to study the trend of abortion attitudes over two decades. Based on a multi-stage random sampling method, a sample of 2,600, 2,900, and 1,800 of the Iranian population aged 18 and over were selected for the 2000, 2005, and 2020 Iran surveys, respectively.

**Measurements**

The dependent variable is the attitude toward abortion, measured by one general item, asking respondents “whether you think abortion can always be justified, never be justified, or something in between”. The respondents could answer this item by choosing a score ranging from 1 to 10, where 1 referred to “abortion is never justifiable” and 10 referred to “abortion is always justifiable”. Independent variables are four socio-cultural factors, identified in the WVS as "family values", "disbelief", "gender equality", and "post-materialist values". Table 1 shows the items used by WVS for each of these cultural features.

To calculate indices of these factors, the items of each factor were first aligned. Then, a summation of their standardized scores was calculated. The score related to all indices fluctuates between zero and one. The higher the score on the family attitude index, the more modern the family attitude will be. In the case of the disbelief index, the higher the score, the lower the religious values. The respondents who obtained a higher score on the index of attitude toward gender equality are those who have a more positive attitude toward gender equality in society. If the respondent scores higher on the post-materialist index, she/he tends more toward post-materialist values.

The study utilized analysis of variance to assess changes in abortion attitudes over time and across birth cohorts, in addition to descriptive statistics. Multivariate linear regression analysis was employed to examine the relationship between sociocultural factors and attitudes toward abortion while taking into account the respondent's age, sex, literacy status, level of education, place of residence, and marital status.

**Table 1.** Indicators of Sociocultural Indices

Index	Items
Modern family values	How important family is in your life? If someone says a child needs a home with both a father and a mother to grow up happily, would you tend to agree or disagree? Do you agree or disagree with the following statement? "Marriage is an outdated institution". How much do you trust your family? How much do you agree with the following statement? “Duty toward society to have children” How much do you agree with the following statement? “It is child’s duty to take care of ill parents” . Please tell me whether you think the following statements can always be justified, never justified, or something in between. “Sex before marriage” .
Disbelief	“Independently of whether you go to places of worship or not, would you say you are: A religious person, not a religious person, A convinced atheist? Indicate how important Religion is in your life? How often do you attend religious services?

Index	Items
Gender equality	How much do you agree with the following statements?
	– “University education is more important for a boy than for a girl”.
	– “Men make better political leaders than women do”.
	– “Men make better business executives than women do”,
	– “Jobs scarce: Men should have more right to a job than women”.
Postmaterialist values	– “By requiring that a man treat all of his wives equally, the true intent of Islam is to prohibit a man from taking more than one wife”
	Could you please tell me how important you consider following national goals to be?
	– Maintaining order in the nation
	– Giving people more say
	– Fighting rising prices
	– Free speech.
	In your opinion, which one of these is most important?
	– A stable economy
	– Progress toward a less impersonal and more humane society
	– Ideas counting more than money
	– The fight against crime

Source: World Values Survey Questionnaires (2000, 2005, 2020).

## RESULTS

### Sample characteristics

Table 2 displays the distribution of respondents based on their individual characteristics in the surveys conducted in 2000, 2005, and 2020. More than two-thirds of the respondents were in 2000 and 2005 and approximately 40% of those in the 2020 survey were below 35 years of age. The median age of the participants in these surveys was 29, 30, and 38 years, respectively. Although the percentage of married people in each survey was higher and increased over time, the percentage of respondents who were married, divorced, or widowed in 2020 was higher than in the other two surveys. The majority of respondents were urban residents who were literate and had secondary education, while less than a quarter had full-time or part-time employment in the 2005 and 2020 surveys, and only one-third had jobs in the 2000 survey.

**Table 2.** Percentage distribution of the study samples by individual characteristics, 2000 (N = 2535), 2005 (N = 2667), and 2020 (N = 1499)

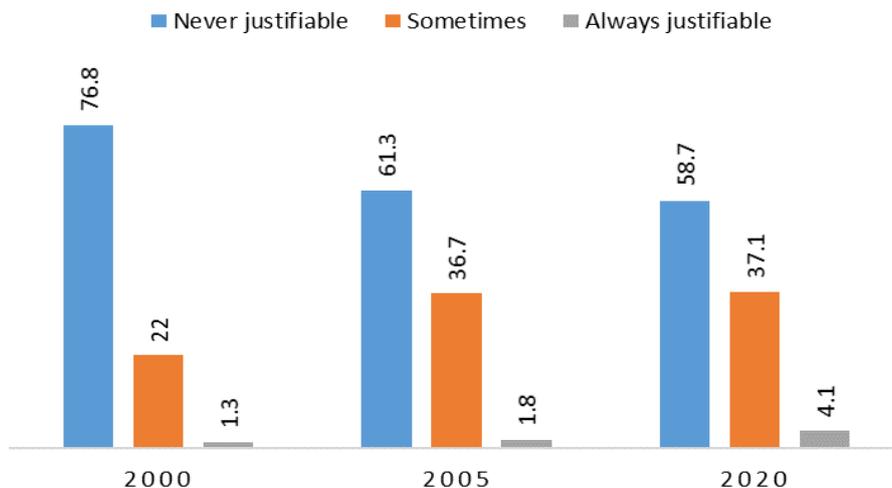
Individual characteristics		Year		
		2000	2005	2020
Sex	Male	53.8	50.1	51.1
	Female	46.2	49.9	48.9
Age	18-24	37.6	33.8	18.2
	25-34	23.1	29.8	20.4
	35-44	15.0	18.5	28.6

Individual characteristics	Year			
	2000	2005	2020	
	45-54	10.4	11.3	16.5
	55-64	7.3	4.2	10.1
	65+	6.6	2.5	6.1
Marital status	Married	57.5	63.1	64.6
	Divorced	1.0	0.9	2.8
	Widowed	1.5	1.6	3.0
	Never Married	40.0	34.4	29.6
Place of residence*	Urban	64.3	-	74.0
	Rural	35.7	-	26.0
Employment status	Full time	22.4	18.1	16.9
	Part-time	10.6	6.3	7.6
	Self-employed	13.4	16.0	14.0
	Retired	3.7	4.0	5.9
	Housewife	20.1	28.6	25.3
	Students	10.7	8.6	11.1
	Unemployed	10.9	17.8	18.0
	Other	8.2	0.5	1.1
Literacy	Illiterate	6.9	6.5	4.2
	Literate	93.1	93.5	95.8
Level of Education	Primary	20.1	25.9	17.6
	Secondary	50.6	48.3	51.6
	Tertiary	29.3	25.9	30.8

\* In 2005, place of residence has not been asked. Source: calculated by the authors.

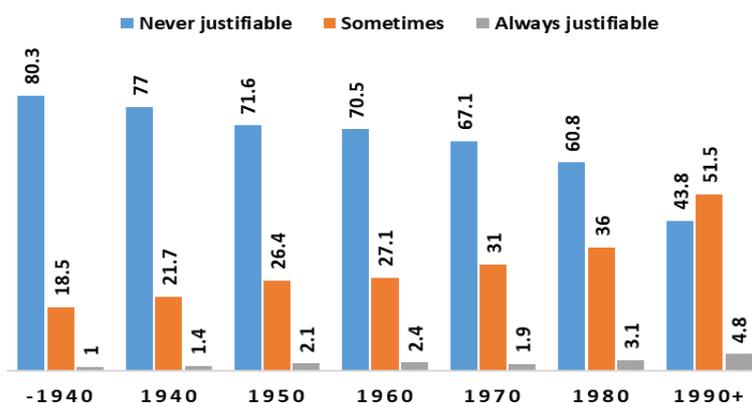
**Trends and changes in attitudes toward abortion**

Although abortion is illegal in Iran, shown in Figure 1, the percentage of respondents who do not consider abortion to be justified has decreased by 4.23% from 77% in 2000 to 59% in 2020. At the same time, those who think abortion is sometimes justified have changed dramatically. The proportion of these people has increased by 68%, from 22% in 2000 to 37% in 2020. In addition, the percentage of respondents who consider abortion always justified has also increased, from 1% in 2000 to 4% in 2020.



**Figure 1.** Attitudes toward abortion during 2000-2020, Iran (Calculated by the authors)

Generally speaking, it can be said that strict attitudes toward abortion have changed and become easier in Iran over time. A growing number of people believe that there may be circumstances in which abortion is justified. Moreover, similar trends of changing attitudes toward abortion can be seen across birth cohorts. As shown in Figure 2, abortion was viewed more justifiable as moving from older birth cohorts to the most recent cohorts. For example, the proportion of respondents who "never justified" abortion monotonically decreased from 80% among respondents who were born before 1940 to 44% among those who were born in 1990 or after. However, the proportion of respondents who viewed abortion as "sometimes" or "always" justifiable monotonically increased across the birth cohorts, from 19% and 1% among the oldest cohorts to 52% and 5%, in the most recent birth cohorts, respectively.



**Figure 2.** Attitudes toward abortion by birth cohorts, Iran: 2000-2020 (calculated by the authors)

Table 3 presents the mean score of attitudes toward abortion in Iran for three waves of the World Values Survey across diverse birth cohorts. The results illustrate that the mean score of attitudes toward abortion has increased continuously over the last two decades from 2000 to 2020. Moreover, there is an observed increase in the variance of the mean scores across different birth cohorts as time progresses. The more recent the cohort, the greater the alterations and variations in the scores. For example, the difference in the mean score between the cohorts born in 1970 and 1980 escalated from 0.26 to 0.76 between the cohorts born in 1980 and 1990.

**Table 3.** Mean scores of abortion attitude by year and birth cohort, Iran: 2000, 2005 and 2020

Year	Mean	Birth Cohort	Mean
2000	1.84	Before 1940	1.62
2005	2.31	1940	1.75
2020	2.73	1950	1.92
		1960	2.08
		1970	2.20
		1980	2.46
		1990 and over	3.22
F	81.152	F	27.745
Sig.	0.000	Sig.	0.000
Levene Statistic	176.911	Levene Statistic	46.441

The trend of increasing mean scores of attitudes toward abortion in Iran among the population under investigation suggests a growing inclination toward abortion approval. Furthermore, noteworthy differences in the mean scores of attitudes toward abortion across various years and birth cohorts imply that these changes are unlikely to have occurred by chance alone. A p-value of 0.001 or lower indicates statistically significant results bolstering the claim of increased abortion approval in Iran over time

### **Correlates of attitudes toward abortion**

The perception of attitudes toward abortion is influenced by numerous factors. To explicate the alterations in Iranian attitudes regarding abortion, we scrutinized the individual and cultural correlates of their attitudes in three surveys, as presented in Table 4. Two models were employed for each survey, where Model 1 demonstrated the individual-level correlates of attitudes toward abortion, including sex, place of residence (urban versus rural), education, and marital status. On the other hand, Model 2 incorporated the variables of Model 1 and cultural aspects such as views on gender equality, post-materialist values, religiosity, and contemporary notions of family dynamics. This study provides a comprehensive understanding of how individual and cultural factors interact to shape Iranians' attitudes toward abortion.

According to the information presented in Table 4, education and marital status were significant factors affecting attitudes toward abortion among respondents in 2000. As depicted, respondents with secondary and university education exhibited a more favorable attitude toward abortion compared to those without formal education. Additionally, marital status was found to play a role in shaping respondents' attitudes toward abortion, with married respondents exhibiting a more negative attitude compared to unmarried participants. However, it is worth noting that the adjusted R-squared value of 0.019 indicates that only two percent of the variation in attitudes toward abortion in 2000 can be explained by individual characteristics. Based on the information in Table 4, place of residence and gender did not have a significant effect on the attitude toward abortion. The role of cultural variables in shaping attitudes toward abortion was significant. In a regression analysis that included both cultural variables and individual characteristics (model 2), the adjusted R-square increased to 34.5%. The combined effect of these variables indicated that individual characteristics, except for tertiary education, did not significantly explain respondents' attitudes toward abortion. Conversely, all cultural variables had a significant effect, although their direction varied. Specifically, an inverse relationship existed between post-materialistic values and attitudes toward abortion, such that respondents with higher scores on post-materialistic values were less likely to agree with abortion. Meanwhile, respondents with lower religiosity had more positive attitudes toward abortion. Furthermore, those with a modern attitude toward different aspects of life tended to have a positive attitude toward abortion.

The multivariate analyses in 2005 yielded results that were markedly similar to those obtained in 2000. Although individual characteristics accounted for less than two percent of the variance in attitudes toward abortion (model 1), the influence of cultural variables has increased. Model 1 indicated that education and marital status continued to exert a significant effect on attitudes toward abortion. However, the addition of cultural variables in Model 2 revealed that only university education, along with cultural attitudes, had a determining effect on attitudes toward abortion among the individual characteristics in Model 1. Notably, compared to the 2000

survey, post-materialist values no longer had a significant impact. These findings suggest that the role of cultural factors in shaping attitudes toward abortion has become increasingly important over time.

Based on the results, the influence of contextual factors in explaining changes in attitudes toward abortion increased to 4.5% in 2020. Additionally, variables such as living in urban areas, tertiary education, and marital status were found to be significant in the first model (model 1). However, the adjusted R square (48.8%) emphasizes the importance of cultural variables in influencing respondents' attitudes toward abortion. According to Model 2, the presence of both contextual factors and cultural variables has reduced the influence of contextual factors, with cultural variables playing a more important role in explaining attitudes toward abortion in the 2020 survey. Post-materialist values among the cultural factors did not have a significant effect on attitudes toward abortion, according to Table 4. Conversely, individuals with lower religious beliefs, having a positive attitude toward gender equality, and modern family values are expected to have a positive attitude toward abortion.

**Table 4.** Estimated coefficients from linear regression analysis of the factors associated with attitudes toward abortion, Iran: 2000, 2005, 2020

	2000		2005		2020	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
(Constant)	0.058*	0.077 <sup>ns</sup>	0.102**	0.109**	0.207**	0.214**
Female (ref.)						
Male	-0.017 <sup>ns</sup>	-0.010 <sup>ns</sup>	0.004 <sup>ns</sup>	-0.019 <sup>ns</sup>	-0.047 <sup>ns</sup>	-0.004 <sup>ns</sup>
Rural (ref.)						
Urban	0.036 <sup>ns</sup>	-0.018 <sup>ns</sup>	-	-	0.088**	0.020 <sup>ns</sup>
Illiterate (ref.)						
Primary	0.061 <sup>ns</sup>	0.025 <sup>ns</sup>	0.054 <sup>ns</sup>	0.001 <sup>ns</sup>	-0.032 <sup>ns</sup>	-0.020 <sup>ns</sup>
Secondary	0.114*	0.043 <sup>ns</sup>	0.140*	0.054 <sup>ns</sup>	0.030 <sup>ns</sup>	-0.016 <sup>ns</sup>
Tertiary	0.162**	0.68*	0.156**	0.061*	0.099*	0.004 <sup>ns</sup>
Never married (ref.)						
Married	-0.073**	-0.039*	-0.049*	-0.019 <sup>ns</sup>	-0.147**	-0.032 <sup>ns</sup>
Disbelief		0.072**		0.036*		0.063*
Postmaterialist		-0.043*		0.029 <sup>ns</sup>		-0.010 <sup>ns</sup>
Gender Equality		0.003 <sup>ns</sup>		0.037*		0.054*
Family values		0.552**		0.602**		0.668**
F	8.604**	117.548**	9.179**	182.119**	14.078**	131.490**
R2adj.	0.019	0.345	0.015	0.387	0.045	0.488

\*Significant at  $p < .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ . (ref) = Reference category; Source: calculated by the authors.

According to these findings, cultural factors have become more significant in shaping attitudes toward abortion in Iran for twenty years from 2000 to 2020, while contextual variables have decreased in importance over time. Overall, the findings suggest that cultural factors play an increasingly important role in shaping attitudes toward abortion in Iran.

## DISCUSSION AND CONCLUSION

Although abortion is an almost universal phenomenon with a long history, it has always provoked much discussion and debate. Disagreements are usually concerned

with the laws relating to abortion made by different societies. In Muslim societies, abortion is only possible under certain circumstances. In Iran, abortion is allowed only if the mother's life is in danger or the fetus is defective. However, in Iran, as in other parts of the world, illegal abortion is common. The question is why people, despite the existing restrictions, still have abortions.

Attitude toward different issues is one of the main determinants of human behavior. Undoubtedly, if people have a positive attitude toward abortion, they are more likely to have an abortion. In societies such as Iran, where abortion is restricted by law and religion, this will lead to unsafe abortions. Globally, more than 25 million unsafe abortions occur annually, 97 percent of which are performed in developing countries. According to the United Nations Population Division (2020), restricting legal access to abortion does not necessarily reduce abortion, but is likely to increase the number of women seeking illegal abortion.

This article aimed to study the attitude of individuals toward abortion and its changes in Iran during 2000-2020, based on data from the World Values Survey. According to the findings, attitudes toward abortion have changed significantly during the last two decades. Although in all three surveys, most people did not find abortion acceptable under any circumstances, their number has decreased over time. In addition, the number of people who accepted abortion in 2020 under any circumstances is about four times higher than in 2000.

Some parts of this change can be attributed to the social changes that have taken place in Iranian society. Compared to the past, more women have entered the labor market (Karimi et al. 2013), the level of women's literacy has increased, and the number of women, who have entered the university, especially in recent years, is more than men (Abbasi-Shavazi and Sadeghi 2013). In addition, men spend more years studying. Changing literacy and improving the level of education lead to individual changes and transformations in personal ideals and attitudes. Education also forces people to re-evaluate the value of children and the role of women in society by expanding their horizons beyond the traditional boundaries of society. Education provides a world for educated people that reshapes their traditional tendencies and gives them new opportunities to apply new tendencies (Hosseini 2013: 100). The results of this study showed that people with tertiary education have a more positive attitude toward abortion compared to other groups.

Another important finding of this study is the generational changes under the effect of the age structure transition of the Iranian population over the last four decades. The elderly population, most of whom were illiterate, have moved out of the age pyramid and been replaced over time by more educated people. This replacement process will continue. New generations, who usually have different values and attitudes, have manifested different behaviors, especially in the field of family (Bagi and Abbasi Shavazi 2020). The results showed that university education is one of the individual characteristics that has maintained its significant impact in the presence of cultural variables. Other studies have confirmed this relationship (Erfani and Shojaei 2018; Debela and Mekuria 2018; Loll and Hall 2019).

The results of this study indicated that younger generations have a more positive attitude toward abortion compared to older generations. For example, in the youngest birth cohort, the number of people who considered abortion justified under any circumstances was about five times higher than in the oldest cohort. The number of people who allow abortion under certain conditions is higher in younger cohorts

than in those who do not accept it at all. However, in older cohorts, more than 70 percent of people do not justify abortion under any circumstances. Similar results were obtained by Smith (2009) and Barringer, Sumerau, and Gay (2020). These studies showed that younger generations have a more positive attitude toward abortion. On the other hand, Cook, Jelen, and Wilcox (1993) found that younger cohorts are less supportive of abortion. This study showed that sex does not have a significant effect on the attitude toward abortion. Although slight differences were observed in the attitudes of men and women, the differences were not statistically significant. This result is contrary to the results of the studies conducted by Loll and Hall (2019), Movahed, Azemat, and Moaven (2014), Farash, Sadeghi, and Ramzi (2020).

Cultural characteristics are another determinant of changes in people's attitudes toward abortion. Today, globalisation, the widespread use of social media, and widespread access to mass media have led to wide-ranging changes in the cultural values and norms of traditional societies. The consequences of these changes can be observed in factors such as the diminishing role of religion in the decisions made by individuals, increasing gender equality, and changes in family-related values. Changing people's attitudes toward various issues, including abortion, is one of the consequences of these changes. The results of this study revealed that less religious affiliation, having modern family values and a positive attitude toward gender equality positively affect the attitude toward abortion. Lack of religious adherence has a positive effect on attitudes toward abortion. This relationship was seen in all three surveys.

This result is in line with Erfani and Shojaei (2018) findings about the relationship between religious beliefs and the prevalence of abortion in Tehran. The effect of religious beliefs on the attitude and action toward abortion has been confirmed in other research (Jelen 2014; Movahed, Azemat, and Moaven 2014; Cragun and Sumerau 2014; Hoffmann and Johnson 2005; Kelly and Grant 2007; Adamczyk 2013; Fish 2011; Jelen and Wilcox 2003; 2005).

This study also showed that the attitude toward gender equality has a positive relationship with the attitude toward abortion. A similar result was obtained by Jelen (2014). This study showed that over time (from 2000 to 2020), the effect of modern family values on the attitude toward abortion has increased. This result can be attributed to the larger number of young cohorts in the 2020 survey.

Generally speaking, it seems that changes in people's beliefs and thoughts have a more determining effect on the development of positive attitudes toward abortion than their individual characteristics. Given the ongoing process of generational replacement and the changing attitudes of younger birth cohorts toward abortion, the rate of abortion is expected to increase in the coming decades in Iran. To avoid the negative effects and consequences of unsafe abortions, revision in the rules and conditions of abortion seems necessary.

### **Acknowledgments**

An earlier version of this paper was presented at the 'Session 1.1 Fertility 1: International perspectives' of Annual Meeting of the Canadian Population Society, May 31–June 2, 2023. Valuable comments from Professor Amir Erfani are gratefully acknowledged.

### **Funding**

The authors received no funding for this study.

**Conflicts of Interest**

None declared.

**Author's Contributions**

All the authors equally contributed to this work.

**REFERENCES**

- Abbasi-Shavazi, M.J., Sadeghi, R. (2013). Demographic and Socio-economic Status of Youth in I.R. Iran, Working paper for United Nations Population Fund (UNFPA).
- Abdollahyan, H., and M. Fallah. (2008). A qualitative analysis of intentional abortion and phenomenology of women's lived experience: some case studies of women in Tehran, *Journal of Population Association of Iran*, 3(5):55-80.
- Adamczyk, A. (2013). The effect of personal religiosity on attitudes toward abortion, divorce, and gender equality- does cultural context make a difference? *EurAmerica*, 43(1):213-253.
- Aghayari Hir, T., and A. H, Mehryar. 2007. Estimation of induced abortion rates in Iran: Application of proximate determinants model, *Journal of Population Association of Iran*, 2(3):61-91.
- Ajzen, I. & Fishbein, M. (1980) *Understanding Attitudes and Predicting Social Behavior*. Prentice Hall, Englewood-Cliffs, NJ.
- Bagi, M., and Abbasi-Shavazi, M.J. (2020). Household formation and living arrangements of the youth in Iran: Evidence of delay in the transition to independent living, *Journal of Cultural Studies Communication*, 16(59):243-274.
- Barringer, M. N., Sumerau, J.E., & Gay, D.A. (2020). Generational Variation in Young Adults' Attitudes toward Legal Abortion: Contextualizing the Role of Religion. *Social Currents*, 7(3):279-296.
- Bearak, J., A. Popinchalk, B. Ganatra, A-B. Moller, Özge. Tunçalp, C. Beavin, L. Kwok, L. Alkema. (2020). Unintended pregnancy and abortion by income, region, and the legal status of abortion: estimates from a comprehensive model for 1990-2019, *The Lancet Global Health*, 8(9):1152-1161.
- Bongaarts, J., and Charles F. Westoff. (2000). The Potential Role of Contraception in reducing abortion. *Studies in Family Planning*, 31(3):193-202.
- Cook EA., Jelen T.G., and Wilcox C. (1993). Generational Differences in Attitudes toward Abortion, *American Politics Quarterly*, 21(1):31-53.
- Cragun, R.T., & Sumerau, J.E. (2014). Men Who Hold More Egalitarian Attitudes toward Women Working Outside the Home in the US: Who Are They? *Human Prospect*, 4(1):10-24.
- Debela, T.F., and Mekuria M.S. (2018). Knowledge and attitude of women toward the legalization of abortion in the selected town of Ethiopia: a cross-sectional study, *Reproductive Health*, 15(1):1-9.
- Erfani. A. (2015). Curbing publicly-funded family planning services in Iran: Who is affected? *Journal of Family Planning and Reproductive Health Care*, 43(1): 37-43.
- Erfani, A. (2016). Levels, Trends, and Correlates of Abortion in Tehran, Iran: 2009-2014, *International Perspectives on Sexual and Reproductive Health*, 42(2):93-101.
- Erfani, A. (2017). Low fertility intention in Tehran, Iran: The role of attitudes, norms, and perceived behavioral control, *Journal of Biosocial Science*, 49(3): 292-308.

- Erfani, A. (2019). Iran's second demographic transition and below-replacement fertility: Implications for population policies. *Istanbul University Journal of Sociology*, 39(2):475-478.
- Erfani, A., H, Hosseini. (2019). The 2018 Hamedan Survey of Marriage and Fertility is, Joint Research project between Nipissing University (Canada) and Bu-Ali Sina University (Iran), Hamedan, Iran.
- Erfani, A., and J, Shojaei. (2018). New Evidence on Induced Abortion in Tehran, Iran: Rates, Causes, and Changes. *The Iranian Journal of Obstetrics, Gynecology and Infertility*, 21(3):64-77.
- Farash, N., Sadeghi, R. and Ramzi, N. (2020). Social and cultural determinants of students' attitudes toward abortion. *Women's Strategic Studies*, 22(87):109-130.
- Fish, M. Steven. (2011). *Are Muslims distinctive?: A look at the evidence*: Oxford University Press.
- Ganatra B, Gerdt C, Rossier C, Johnson Jr B R, Tuncalp Ö, Assifi A, Sedgh G, Singh S, Bankole A, Popinchalk A, Bearak J, Kang Z, Alkema L. (2017). Global, regional, and subregional classification of abortions by safety, 2010-14: estimates from a Bayesian hierarchical model. *The Lancet*. Volume 390.
- Hoffmann, J. P., & Johnson, S.M. (2005). Attitudes toward abortion among religious traditions in the United States: Change or continuity? *Sociology of Religion*, 66(2):161-182.
- Hosseini, H. (2013). *Socioeconomic Demography and Family Planning*, Fifth Publication, Hamedan, Bu-Ali Sina University Press.
- Hosseini H., Erfani. A, Nojomi. M. (2017). Factors associated with the incidence of induced abortion in Hamedan, Iran. *Arch Iran Med*, 20(5):282-287.
- Inglehart, R., Haerpfer, C., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano, J., Lagos, B., Norris, P., Ponarin, E., Puranen, B., et al. (Eds.). (2014). *World Values Survey: Round six-country-pooled data file version*. JD Systems Institute. [www.worldvaluessurvey.org/WVSDocumentationWV6.jsp](http://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp).
- Jelen, T.G. (2014). The subjective bases of abortion attitudes: A cross-national comparison of religious traditions. *Politics and Religion*, 7(3):550-67.
- Jelen, T.G., and Wilcox, C. (2003). Causes and consequences of public attitudes toward abortion: A review and research agenda. *Political Research Quarterly* 56(4):489-500.
- Jelen, T.G., and Wilcox, C. (2005). Continuity and change in attitudes toward abortion: Poland and the United States. *Politics & Gender*, 1(2):297-317.
- Karimi Moughari, Z., Nazifi Nainie, M., Abbaspour, S. (2013). Evaluating the economic factors affecting employment of women in Iran using artificial neural network approach. *Women's Studies Sociological and Psychological*, 11(3):53-80. doi: 10.22051/jwsps.2014.1446.
- Kelly, K., & Grant, L. (2007). State abortion and nonmarital birthrates in the post-welfare reform era: The impact of economic incentives on reproductive behaviors of teenage and adult women. *Gender & Society*, 21(6):878-904.
- Loll, D., and Hall K.S. (2019). Differences in abortion attitudes by policy context and between men and women in the world values survey. *Women & Health*, 59(5):465-80.
- Marston, C., and J, Cleland. (2003). Relationships between contraception and abortion: A review of the evidence, *International Family Planning Perspectives*, 29(1):6-13.

- Movahed, M., Azemat, S., and Moaven Z. (2014). A study on cultural factors associated with attitudes toward abortion (Case study: 18-29 year-old youth in Shiraz city). *Sociological Cultural Studies*, 5(1):87-111.
- Say L., Chou D., Gemmill A., Tunçalp Ö., Moller AB., Daniels JD., et al. (2014). Global Causes of Maternal Death: A WHO Systematic Analysis. *The Lancet Global Health*. 2(6):323-333.
- Singh, S., L. Remez., G. Sedgh., L. Kwok., and T. Onda. (2017). *Abortion worldwide 2017: uneven progress and unequal access*, Guttmacher Institute, 2018.
- Smith, T.W. (2009). An analysis of cohort differences on abortion attitudes, 1972-2006. NORC/University of Chicago.
- United Nations Population Division (2020). World Population Policies 2017: Abortion laws and policies-A global assessment: Highlights (ST/ESA/SER.A/448).
- Weeks, John R. (2016). *Population: Introduction to Concepts and Issues*, Twelfth Edition (Boston, MA: Cengage Learning).
- World Health Organization (2012). Safe and unsafe induced abortion: Global and regional levels in 2008 and trends during 1995-2008, Department of Reproductive Health and Research.