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PREGNANCY AND ABORTION IN IRANIAN PREGNANT WOMEN'S: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Conflicts of Interest: Nil
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ABSTRACT

Aim: The aim of this systematic review and the meta-analysis was to evaluate the Pregnancy and abortion in Iranian pregnant women's.

Methods: The proposed protocol and the methods used in this systematic study were developed based on the Cochrane Handbook for Systematic Reviews of Interventions and reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Observational studies conducted on the general population are attached and studies on specific populations (acute conditions, home care centers) were excluded.

Results: According to the results of the randomized method (95% CI), the overall Pregnancy and abortion in Iranian pregnant women's (Fetal causes) prevalence rate among 773 persons was 65.3%(95% CI 61.8-68.9), I^2 = 92.3%, the overall The prevalence of Pregnancy and abortion in Iranian pregnant women's (Maternal causes) prevalence rate among 773 persons was 21.4%(95% CI 18.7 – 24.1), I^2 = 96.1%.

Conclusion: there is still a long way to reach the goal of family planning and to secure the planned and safe fertility. Also, enhancing the coverage of family planning and changing the composition of the coverage of modern and more sustainable contraceptive methods are important (18). The risk of pregnancy is much higher in the use of traditional methods and condom than other methods. More than 90% of the users of these two uncertain methods did not know the ways to prevent the consequences of their accidental failure.

Key words: Anomalies, abortion, etiology, miscarriage

INTRODUCTION

Unsafe abortion is still one of the causes of maternal mortality in developing countries. Annually, 46 million unwanted pregnancies are aborted worldwide, of which 27 million through legal channels, and 19 million out of the legal ways are performed by unskilled people or in appropriate places without medical standards (1). The women's increased access to contraceptive methods, abortion under hygienic conditions, and post-abortion care services led to a reduction in the maternal mortality rate from 69000 women in 1990 to 47000 in 2008 (2). 13% of maternal deaths in developing countries in 1990 were due to unsafe abortions, and this percent remained constant until 2008 (3). Unsafe abortion not only causes maternal death but also leads to short-term complications such as hospitalization and long-term complications such as infertility (4). Women who feel that pregnancy is dangerous to their physical and mental health or their social status most of the time desperately try to end their unintended pregnancies (5). Although unsafe abortion is recognized as a global health issue, it is difficult to collect reliable information, especially in countries where abortion is illegal (6).

Complications after abortion are divided into immediate and delayed complications. The perforation of the uterus and the loss of Tunisia are immediate complications. Delayed complications include hemorrhage, infection, ectopic pregnancy, cervical stenosis and Asherman syndrome (7).

Spontaneous or accidental abortion occurs when the fetus is spontaneously discharged without medical or mechanical techniques for uterine drainage. Fetal abnormalities and factors related to the mother or father can be the cause of the discharge. More than 80% of these abortions occur in the first trimester and at least, half of which have chromosomal abnormalities (8). About 95% of chromosomal abnormalities are due to maternal gametogenesis error and 5% are due to paternity errors. Autosomal trisomy is the most common chromosomal abnormality associated with the first trimester abortion.

Abortion means the intentional termination of pregnancy with medication or surgery before the fetus can survive (9).

Methods

Enrollment and Inclusion Criteria

The proposed protocol and the methods used in this systematic study were developed based on the Cochrane Handbook for Systematic Reviews of Interventions and reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Observational studies conducted on the general population are attached and studies on specific populations (acute conditions, home care centers) were excluded. The results were formulated as reported in the study. The minimum sample size was 25 patients per study. The target population was the entire Iranian pregnant women.

International databases (PubMed, Google Scholar, WOS, and Scopus) and national databases (SID, MAGIRAN) and national publications were reviewed to find similar studies without language and regional constraints from September 1 to 30, 2019. The MEDLINE research strategy was used to search for other databases. Specific research strategies were developed by the Health Sciences Library specializing in systematic reviews based on the Peer Review of Electronic Search Strategies (PRESS) . Also, PROSPERO was used for ongoing and recently completed systematic reviews. Boolean operator (AND, OR, and NOT), Medical Subject Headings (MeSH), cut "*", and related textual words were used to search for titles and abstracts with the following keywords: Anomalies, abortion, etiology, miscarriage , and IRAN.

Research Selection and Data Extraction

According to the research protocol, two researchers separately reviewed the research titles and abstracts based on the inclusion criteria. In the next step, after excluding repeated studies, the full manuscripts of the studies were reviewed according to the inclusion criteria and the required data and information were extracted. The consensus method was used to resolve differences and inconsistencies between the two researchers. The data extracted included general information (first author, year, and place), research characteristics (the research design, the sample size, location, study period, and bias risk), participants' characteristics, and output (prevalence) calculations.

Quality Assessment

To assess the quality of the methodology and the bias risk, each observational study was evaluated using the instrument developed by Hoy et al. This 10-item instrument assessed the quality of the study in two dimensions, including external validity (items 1 to 4 assessed the target population, the sampling frame, the sampling method, and the minimum indirect neglect) and internal validity (items 5 to 9 assessed the methods of data collection, case definitions, instruments, and data collection modes, and item 10 evaluated the analysis-related bias). The bias risk was assessed separately by two researchers and any inconsistency was resolved by consensus.

Data Synthesis

All studies that met the inclusion criteria were synthesized after a systematic evaluation. The data were combined with the accumulation graph. The random-effects model was evaluated based on the overall quality of life. The heterogeneity of the initial studies was assessed by I^2 tests. The subgroup analysis was performed to determine heterogeneity based on gender and age. The meta-analysis was performed using STATA14 software (STATA CORP, COLLEGE STATION, TX, USA).

Results

General Findings

Research Selection

In the initial review, 187 articles were selected from different databases. Of the 179 non-useful studies identified in the review of titles and abstracts, 81 articles were deleted because they had inappropriate titles. Of the 98 studies, 5 met the inclusion criteria. Of the 92 excluded studies, 12 were review studies, 3 letter to editor, and 72 articles did not meet the minimum requirements to be included in the review (Fig. 1).

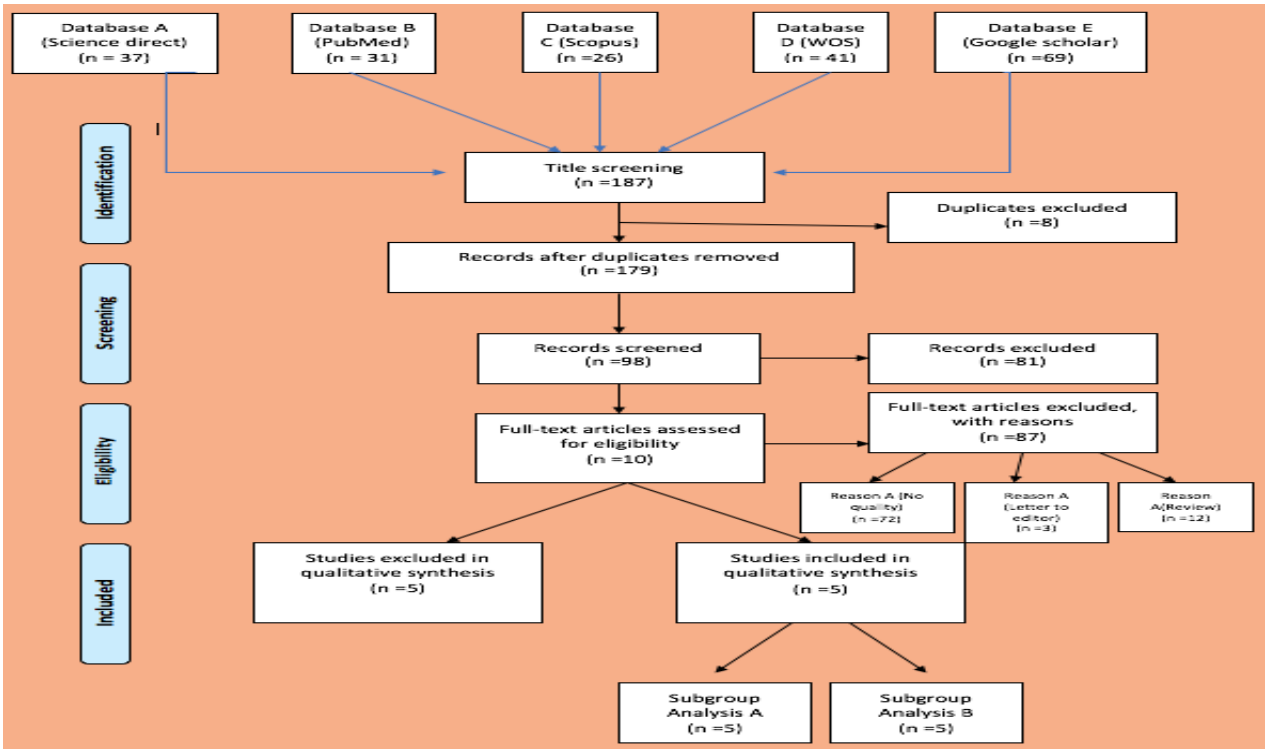

Fig 1: PRISMA flow diagram

Research Characteristics

The study was conducted on 773 participants. Their ages ranged from 17 to 46 years. All 5 included studies had cross-sectional data. 5 studies were from Gilan,Rasht , Kerman , Sanandaj, Lorestan. The most frequently used sampling method was multistage random sampling (N = 3). All studies had a low bias risk. (Table 1).

Main Results

According to the results of the randomized method (95% CI), the overall Pregnancy and abortion in Iranian pregnant women's (Fetal causes) prevalence rate among 773 persons was 65.3%(95% CI 61.8-68.9), I^2 = 92.3%, the overall The prevalence of Pregnancy and abortion in Iranian pregnant women's (Maternal causes) prevalence rate among 773 persons was 21.4%(95% CI 18.7 – 24.1), I^2 = 96.1% (Fig. 2 & 3).

Table 1: Characteristics of final included studies about Pregnancy and abortion in Iranian pregnant women's

	First author	Publication year	Participants	Mean age	prevalence		province
1	Roudsari	2009	120	29.37	81.7%	18.3%	Gilan
2	Rahebi	2006	225	29.8	59.6%	60.4%	Rasht
3	Aminpour	2018	226	28.68	61%	10.6%	Kerman
4	Seyedshohadaei	2010	58	34.2	37.9%	62.1%	Sanandaj
5	Asterki	2015	144	-----	88%	22%	Lorestan

Table 2: Pregnancy and abortion in Iranian pregnant women's

Study	Publication year	95% conf. Interval						Weight
		Fetal causes			Maternal causes	Maternal causes	Maternal causes	
		ES	UP	LOW	ES	UP	LOW	
Roudsari	2009	0.817	0.748	0.886	0.183	0.114	0.252	**15.43**
Rahebi	2006	0.596	0.532	0.660	0.404	0.340	0.468	**17.88**
Aminpour	2018	0.610	0.546	0.674	0.106	0.066	0.146	**45.93**
Seyedshohadaei	2010	0.379	0.254	0.504	0.621	0.496	0.746	**4.71**
Asterki	2015	0.880	0.719	1.050	0.220	0.152	0.288	**1606**
Pooled ES	-----	0.653	0.618	0.689	0.214	0.187	0.241	**100**

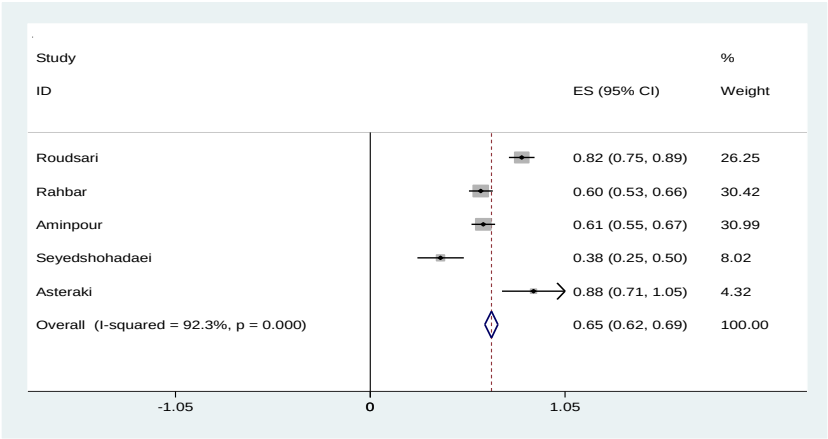

Fig 2: The prevalence of Pregnancy and abortion in Iranian pregnant women's (Fetal causes) and its 95% interval for the studied cases according to the year and the city where the study was conducted based on the model of the random effects model. The midpoint of each section of the line estimates the% value and the length of the lines showing the 95% confidence interval in each study.

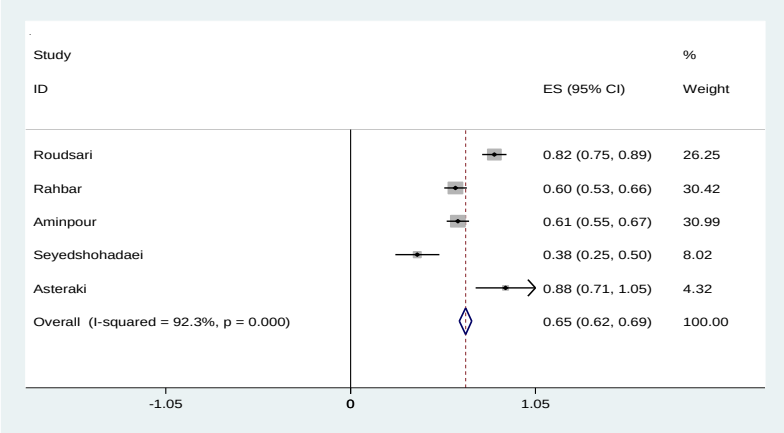

Fig 3: The prevalence of Pregnancy and abortion in Iranian pregnant women's (Maternal causes) and its 95% interval for the studied cases according to the year and the city where the study was conducted based on the model of the random effects model. The midpoint of each section of the line estimates the% value and the length of the lines showing the 95% confidence interval in each study.

Discussion

According to the results of the randomized method (95% CI), the overall Pregnancy and abortion in Iranian pregnant women's (Fetal causes) prevalence rate among 773 persons was 65.3%(95% CI 61.8-68.9), I^2 = 92.3%, the overall The prevalence of Pregnancy and abortion in Iranian pregnant women's (Maternal causes) prevalence rate among 773 persons was 21.4%(95% CI 18.7 – 24.1), I^2 = 96.1% .Abortion has been performed since the ancient times and even before. From the point of view of most philosophers and in all the divine religions, abortion is a condemned practice (10). Iran's penal code also provides penalties for abortion (11). The right to life of the fetus is at the discretion of the fetus, and no one, neither religiously nor morally, is permitted to deprive it of life, and abortion beyond the prescribed limits is a major crime both religiously and legally (12).

Thus, there are two main factors in reducing abortion rates: the first is free access to free, appropriate and effective contraceptive facilities, and the second is government and social and economic institutions support for mothers and children (13). So that, pregnancy and motherhood do not have serious and negative effects on the economic, occupational and social status of women in the family and society, and pregnancy becomes an open and well-designed choice and an enjoyable event in women's lives (14). The closeness of the fetus to the mother is a condition that perhaps no two creatures in the world have ever experienced this kind of structural attachment. This relationship is not only biological but also emotional and psychological(15).

Nowadays, there is a growing interest in research on abortion because through it one can see the effects of political changes and the effects of legal induced abortion on reducing the rate of maternal mortality in developed countries (16). The calculation of the rate of death from induced abortion can be done on the basis of the information of the registration system, health unit reports and basic demographic surveys. Information on the grounds for inducing abortion is incomplete, and abortion diagnosis articles have been compiled with deliberate and unintentional errors (17). If emergency prevention methods are not properly trained, the incidence of unintended pregnancy will always remain stable or even increase with the use of ineffective methods. Therefore, there is still a long way to reach the goal of family planning and to secure the planned and safe fertility. Also, enhancing the coverage of family planning and changing the composition of the coverage of modern and more sustainable contraceptive methods are important (18 and 19). The risk of pregnancy is much higher in the use of traditional methods and condom than other methods. More than 90% of the users of these two uncertain methods did not know the ways to prevent the consequences of their accidental failure.

References

1. Bernabé-Ortiz A, White PJ, Carcamo CP, Hughes JP, Gonzales MA, Garcia PJ, Garnett GP, Holmes KK. Clandestine induced abortion: prevalence, incidence and risk factors among women in a Latin American country. Cmaj. 2009 Feb 3;180(3):298-304.
2. Saftlas AF, Wallis AB, Shochet T, Harland KK, Dickey P, Peek-Asa C. Prevalence of intimate partner violence among an abortion clinic population. American Journal of Public Health. 2010 Aug;100(8):1412-5.
3. Aderibigbe SA, Araoye MO, Akande TM, Musa OI, Monehin JO, Babatunde OA. Teenage pregnancy and prevalence of abortion among in-school adolescents in North Central, Nigeria. Asian Social Science. 2011 Jan 1;7(1):122.
4. Batul shahraki mojahed , Morteza Salarzaei , Fateme Parooei. (2017). Investigating pregnancy outcomes in diabetic patients referring to Imam Ali Hospital in Zahedan in 2016. Int. J. Adv. Res. Biol. Sci. 4(8): 64-67. DOI: http://dx.doi.org/10.22192/ijarbs.2017.04.08.010
5. Wallin Lundell I, Sundström Poromaa I, Frans Ö, Helström L, Högberg U, Moby L, Nyberg S, Sydsjö G, Georgsson Öhman S, Östlund I, Skoog Svanberg A. The prevalence of posttraumatic stress among women requesting induced abortion. The European Journal of Contraception & Reproductive Health Care. 2013 Dec 1;18(6):480-8.
6. Rujeni N, Mbanzamihigo L. Prevalence of brucellosis among women presenting with abortion/stillbirth in Huye, Rwanda. Journal of tropical medicine. 2014;2014.
7. Pişkin FÇ, Ütük AE. Prevalence of Neospora caninum in cows with stillbirth and abortion. Etlik Veteriner Mikrobiyoloji Dergisi. 2009;20(1/2):23-6.
8. Shah I, Ahman E. Unsafe abortion in 2008: global and regional levels and trends. Reproductive health matters. 2010 Jan 1;18(36):90-101.
9. Forghani F, Mojahed BS, Moghadam MN. The Study of Abnormal Ultrasound Findings in Abortion Cases Referring to the Amir-Almomenin Maternity Hospital, Zabol, February and March 2017. Indo American Journal of Pharmaceutical Sciences. 2017;4(6):1497-500.
10. Rabbani RA, Ahmad I, Lodhi LA, Ahmad N, Muhammad G. Prevalence of various reproductive disorders and economic losses caused by genital prolapse in buffaloes. Pak Vet J. 2010 Mar 1;30(1):44-8.
11. Santana DS, Cecatti JG, Parpinelli MA, Haddad SM, Costa ML, Sousa MH, Souza JP, Camargo RS, Pacagnella RC, Surita FG, Pinto e Silva JL. Severe maternal morbidity due to abortion prospectively identified in a surveillance network in Brazil. International Journal of Gynecology & Obstetrics. 2012 Oct;119(1):44-8.
12. Aali H, Mir F, Mojahed BS. Investigating the Relationship between Hemoglobin in the First Three Months of Pregnancy and Gestational Diabetes in Pregnant Women Visiting Imam Ali Hospital in Zahedan. Indo American Journal of Pharmaceutical Sciences. 2017;4(6):1706-10.
13. Chan YY, Jayaprakasan K, Zamora J, Thornton JG, Raine-Fenning N, Coomarasamy A. The prevalence of congenital uterine anomalies in unselected and high-risk populations: a systematic review. Human reproduction update. 2011 Jun 24;17(6):761-71.
14. Zolghadri J, Momtahan M, Aminian K, Ghaffarpasand F, Tavana Z. The value of

hysteroscopy in diagnosis of chronic endometritis in patients with unexplained recurrent spontaneous abortion. European Journal of Obstetrics & Gynecology and Reproductive Biology. 2011 Apr 1;155(2):217-20.

15. Kavanaugh ML, Bessett D, Littman LL, Norris A. Connecting knowledge about abortion and sexual and reproductive health to belief about abortion restrictions: findings from an online survey. Women's Health Issues. 2013 Jul 1;23(4):e239-47.
16. Roshankar rudsari E. Frequency and main causes of abortion license issuance in Aboriginal applicants referring to Gilan-Rasht Forensic Medicine Department from 2007 to 2009.
17. Habibzade R. Frequency distribution of causes of abortion in people referred to abortion forensic medicine in Rasht from the beginning of 2001 to the end of 2006.
18. Aminpour M. The Frequency of Causes of Abortion Licensing in Kerman Forensic Medicine Department during 2014-2015 (Doctoral dissertation, Kerman University of Medical Sciences, Kerman, Iran).
19. Seyedoshohadaie F,Zandvakili F,Yusefinejad V,Yousofi J,Gharibi F. Study of the Reasons for Abortion Request in Forensic Medicine Organization of Sanandaj in 2003-2007.