

Iranian Women's Experiences of Unintended Pregnancy and Induced Abortion: A Meta-Synthesis Study

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What's Known

- Unintended pregnancy is a prevalent issue in Iran, influenced by a range of cultural, social, and economic factors. Women often face significant emotional challenges and societal stigma, which impact their decision-making regarding whether to continue the pregnancy or seek an abortion. Furthermore, limited access to reproductive health services exacerbates these challenges, highlighting the necessity for targeted interventions to provide better support.

What's New

- This meta-synthesis integrated 22 qualitative studies, which involved over 600 interviews with Iranian women, to explore experiences of unintended pregnancy.
- Key findings revealed two main themes: "Facing an unintended pregnancy" (including emotional impact, societal norms, and healthcare access) and "The decision-making process" (influenced by avoidance behaviors, socio-economic factors, and conflicting beliefs about motherhood and fetal life).

Abstract

Background: Despite substantial advancements in reproductive health, unintended pregnancy remains a significant public health challenge in Iran. Qualitative studies revealed profound cultural and social complexities surrounding this issue. This study aimed to synthesize the experiences of Iranian women regarding unintended pregnancy and abortion by examining the interplay of cultural, social, economic, and individual factors.

Methods: A meta-synthesis of qualitative studies published between 2004 and 2024 in Persian and English was conducted. A comprehensive search of Scopus, MEDLINE/PubMed Central, Cochrane CENTRAL, ProQuest, Google Scholar, and Iranian databases (SID, Iranmedex, Magiran) was performed using keywords related to unintended pregnancy, induced abortion, and qualitative studies.

Results: The initial search identified 7,839 articles. After screening for relevance, 22 qualitative studies were selected for analysis, encompassing data from 626 individual interviews and 36 focus group discussions. The analysis yielded two main themes and seven sub-themes: 1) Facing an unintended pregnancy (emotional fluctuations, societal norms, and access to health services), and 2) The decision-making process surrounding unintended pregnancies (avoidance reactions, socio-economic factors, psychosocial conflicts in decision-making, and beliefs about maternal roles and fetal life preservation).

Conclusion: Unintended pregnancy poses a serious public health challenge, imposing significant economic, social, and psychological burdens. Synthesizing qualitative evidence on women's decision-making processes is crucial for developing tailored interventions. Policymakers should implement strategies to reduce social stigma through public education and awareness campaigns.

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Introduction

The process of becoming a mother is typically celebrated as a joyous occasion for women and their families. However, this is not universally the case. Unintended pregnancy is often a distressing and stressful experience for the entire family, particularly for the mother.¹ As one of the most challenging issues in global

reproductive health, it can impose significant physical and psychological stress, as well as substantial social and economic burdens on women, families, and communities.^{1, 2}

Studies suggested that higher rates of acceptance towards abortion are often observed among affluent families, women with higher education levels, and those residing in urban areas.³⁻⁵ The decision to terminate or continue a pregnancy is one of the most personal and contentious choices a woman can face. This choice is influenced by a complex interplay of social, cultural, and economic factors, as well as individual circumstances.^{6, 7} These factors can constrain autonomy and expose women to significant pressures that ultimately shape their abortion-related decisions.⁸

Women's emotional states during pregnancy are closely linked to their behaviors. Facing an unintended pregnancy, women may delay, reduce, or entirely avoid seeking prenatal care services.^{4, 9} This avoidance can lead to unsafe abortions and a neglect of necessary treatments for pregnancy-related complications. Furthermore, maternal anxiety and inadequate social support can contribute to the deterioration of both maternal and fetal health.⁶

Evidence indicated that women from lower-income backgrounds and those with less educational attainment experienced higher rates of unintended pregnancies. This trend was particularly pronounced in sub-Saharan Africa, where women with primary and secondary education had 26% and 29% lower likelihood of unintended pregnancy, respectively, than those with no formal education. Furthermore, higher educational levels among male partners were also correlated with reduced rates of unintended pregnancy.¹⁰ High-income nations such as the UK and US exhibited similar patterns, where unintended pregnancies are consistently linked to factors such as inadequate sexual education, lower educational attainment, and poverty. For instance, a UK study highlighted associations between deficiencies in sexual competence and tobacco use,¹¹ while Finer's research emphasized poverty and adolescent age as significant contributing factors.¹²

Unintended pregnancies are the leading cause of induced abortions.^{3, 13} Annually, approximately 56 million abortions occur worldwide, more than half of which are deemed unsafe. These unsafe procedures predominantly occur in regions with restricted access to legal abortion services and contribute substantially to global maternal mortality and morbidity, thereby posing a critical challenge to healthcare systems.^{13, 14} Some Studies demonstrated that

financial, social, and gender hierarchies, coupled with restrictive abortion laws, significantly shape women's decisions regarding abortion.^{15, 16}

In Iran, the reported prevalence of unintended pregnancy fluctuates between 12.5% and 30.6%. These rates exhibit regional variations influenced by diverse cultural, social, and economic factors.^{17, 18}

Qualitative research in Iran illuminates the complex reality of unintended pregnancies. For example, Shahbazi and others and Nourizadeh and colleagues explored how Iranian women navigate intricate decision-making processes shaped by their personal beliefs, familial expectations, and the country's legal restrictions on abortion.^{19, 20} Similarly, Razeghi Nasrabad and others, along with Mohammadi and others, highlighted these women's lived experiences, revealing that unintended pregnancies often evoke profound anxiety and social isolation, particularly within more conservative communities.^{4, 21}

Furthermore, studies by Nourizadeh and others and Azadvari and colleagues indicated that Iranian women employed a range of coping mechanisms when faced with unintended pregnancies, which included seeking support from family and friends, and navigating the complexities of accessing abortion services, and were often shaped by the woman's socio-economic status and personal beliefs.^{22, 23}

Given the significant prevalence of unintended pregnancies in Iran and the potential impact of cultural, social, and legal factors on women's experiences, a thorough understanding of these issues is crucial. Although numerous qualitative studies on the experiences of unintended pregnancy and abortion among Iranian women exist, a comprehensive meta-synthesis that integrates these findings to illuminate their unique needs and challenges is currently lacking.

Therefore, this study aimed to conduct a meta-synthesis to provide an in-depth understanding of Iranian women's experiences regarding unintended pregnancy and abortion, examining the multifaceted cultural, social, economic, and personal determinants that shape them.

Materials and Methods

This study employed a meta-synthesis approach to conduct qualitative data analysis and was approved by the Ethics Committee of Shahrood University of Medical Sciences (code: ID IR.SHMU.REC.1401.153).

Inclusion Criteria

The inclusion criteria for this study were as follows:

- Qualitative and mixed-methods studies that addressed the experiences, decision-making processes, and outcomes related to unintended pregnancy and induced abortion among Iranian women.
- Studies published in either the Persian or the English language.
- Publications limited to the last two decades (from 2004 to 2024).

Exclusion Criteria

The exclusion criteria were:

- Studies that focused specifically on unintended pregnancy among adolescent populations.
- Studies pertained solely to the medical or clinical aspects of abortion procedures.
- Studies reported pregnancies resulting from illegal sexual behaviors.

Search Strategy

This meta-synthesis was conducted to explore and integrate existing knowledge on the experiences of unintended pregnancy, induced abortion, and related decision-making processes.

Systematic Literature Search

A systematic literature search was performed in the following electronic databases: Scopus,

MEDLINE/PubMed Central, Cochrane CENTRAL, Web of Science, Embase, Google Scholar, and Iranian databases (including SID, Iranmedex, Magiran). The search strategy utilized keywords and Medical Subject Headings (MeSH) terms related to the core concepts of “unintended pregnancy”, “induced abortion”, and “qualitative studies”. The search strategy, including four databases and search engines, is outlined in table 1.

Data Extraction

Data extraction and synthesis followed the seven-step framework for meta-synthesis established by Sandelowski and Barroso.²⁴ This process involved formulating the research question, conducting a systematic literature review, searching for and selecting relevant studies, extracting data, analyzing and synthesizing the findings, quality control, and presenting the integrated results. The specific information extracted from each study included author names, publication year, study characteristics, methodology, and primary findings.

Quality Assessment of Studies

The qualitative analysis in this study utilized the Critical Appraisal Skills Program (CASP) checklist.²⁵

Table 1: Search strategy in four databases and search engines

Database	Search strategy	n
MEDLINE/ PubMed Central	#1 (Unplanned pregnancy [Title/Abstract]) OR (unwanted pregnancy [Title/Abstract]) OR (unintended pregnancy [Title/Abstract])	5069
	#2 (Fetal Preservation [Title/Abstract]) OR (Fetal Safeguarding [Title/Abstract]) OR (Fetal protection [Title/Abstract]) OR (Fetal Conservation [Title/Abstract])	190
	#3 (Induce Abortion [Title/Abstract]) OR (Elective Abortion [Title/Abstract]) OR (Therapeutic Abortion [Title/Abstract])	11902
	#4 (Decision-Making [Title/Abstract]) OR (Decision Process [Title/Abstract]) OR (Choice-making [Title/Abstract])	8907
	#5 (Qualitative Research [Title/Abstract]) OR (Exploratory Research [Title/Abstract]) OR (Thematic Analysis [Title/Abstract])	8609
	#5 # 1 AND #2 AND #3 AND #4	5347
Cochrane library	#1 “Unplanned pregnancy “ OR “unintended pregnancy “ OR “unwanted pregnancy “	5395
	#2 “Fetal Preservation “ OR “Fetal Safeguarding “ OR “Fetal Protection» OR “Fetal Conservation “	326
	#3” Induce Abortion” OR “ Elective Abortion “ OR Therapeutic Abortion	18515
	#4 “Decision-Making “ OR “Decision Process” OR Choice-making	4078
	# 5 Qualitative Research “ OR “ Exploratory Research” OR “ Interpretive Research” OR “ Thematic Analysis”	1334
	#6 # 1 AND #2 AND #3 AND #4 AND #5	639
Scopus	TITLE-ABS- KEY ((Unplanned pregnancy * OR unwanted pregnancy * OR unintended pregnancy * AND (“Fetal Preservation *” OR “Fetal Safeguarding *” OR “Fetal protection *” OR “Fetal Conservation *” AND “Induce Abortion*” OR “Elective Abortion *” OR Therapeutic Abortion “ AND “Decision - Making *” OR “Decision Process*” AND “Qualitative Research *” OR “Exploratory Research*” OR “Interpretive Research*” OR “Thematic Analysis*”))	896
Embase	(Unplanned pregnancy *:ti,ab OR unwanted pregnancy *:ti,ab OR unintended pregnancy *:ti,ab) AND (“Fetal Preservation *:ti,ab OR “Fetal Safeguarding *:ti,ab OR “Fetal Conservation *:ti,ab OR “Fetal protection *:ti,ab) AND “Induce Abortion*:ti,ab OR “Elective Abortion”:ti,ab OR “Therapeutic Abortion*:ti,ab AND “ Decision - Making *:ti,ab OR Decision Process :ti,ab OR “Choice-making *:ti,ab AND “Thematic Analysis*:ti,ab OR “Interpretive Research*:ti,ab OR “Qualitative Research *:ti,ab)	957

Statistical Analysis

The qualitative data analysis process was conducted using MAXQDA software (version 2020; VERBI Software GmbH, Berlin, Germany). This tool supported the systematic organization, coding, and thematic synthesis of the findings across the selected studies.

Results

Study Selection Process

The initial database search identified a total of 7,839 articles. After the removal of 6,852 duplicates, 987 records remained. Following a screening of titles and abstracts, 579 articles were excluded due to their quantitative or cohort study designs or limited full-text access, leaving 396 articles for full-text review. The title screening led to the exclusion of an additional 287 records, resulting in 118 articles assessed for eligibility. Upon full-text review, 77 articles concerning medical and spontaneous abortions, 28 studies on abortion due to fetal anomalies, and nine studies focusing on adolescents under 18 years of age were excluded. Consequently, 22 studies met the final inclusion criteria and were incorporated into the qualitative synthesis. To ensure reliability, two researchers independently assessed articles for eligibility at each stage, with any disagreements resolved

through discussion or by consultation with a third researcher. The study selection process is detailed in the PRISMA flow diagram (figure 1).

The results of this meta-synthesis were derived from the analysis of data collected from 22 qualitative Studies that met the inclusion criteria. The included Studies encompassed 626 individual interviews and 36 group interviews involving women aged 18-45 years. Among the 22 studies, three examined the decision-making process regarding abortion or continuation of pregnancy,^{20, 26, 27} nine explored women's experiences with intentional abortion and underlying reasons,^{4, 5, 19, 23, 28-32} eight examined the experiences of women facing unintended pregnancies,^{21, 22, 33-37} two focused on the consequences of induced abortions,^{38, 39} and one investigated the impact of Iran's new population policy on unintended pregnancies.⁴⁰ The characteristics of the included articles are presented in table 2.

Data Categorization

The analysis of the included studies revealed two main themes and seven sub-themes related to Iranian women's experiences of unintended pregnancy and intentional abortion. The first main theme, "Facing an unintended pregnancy," encompassed emotional-affective fluctuations, societal norms, and access to health services.

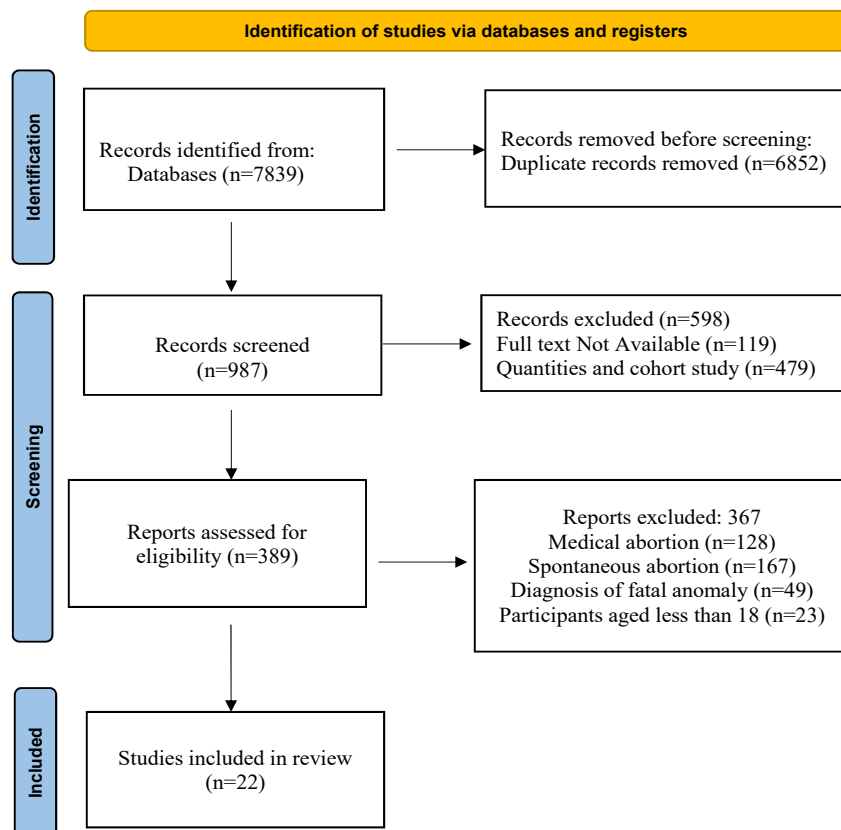


Figure 1: The flow diagram shows the study selection strategies according to the PRISMA guidelines.

Table 2: Characteristics of the included qualitative studies and the summary of findings

	Author, year, Reference	Methods	Sampling Method, Sample size	Findings
1	Chinichian (2007) ²⁸	Qualitative approach using focus group discussions and individual interviews	A total of 36 focus group interviews were conducted with women from various ethnic groups. Additionally, 54 individuals interviewed healthcare providers involved in intentional abortions.	The analysis identified four primary reasons for intentional abortion: rubella vaccination, maternal illness, fetal abnormalities, and unintended pregnancy. Among cases of unintended pregnancy, economic pressures emerged as the most common reason for seeking an abortion, while religious beliefs were the predominant factor influencing the decision to avoid it.
2	Shahbazi (2008) ²⁶	Qualitative study with a content analysis approach	27 semi-structured interviews were conducted with women who had undergone abortions, as well as with religious, political, legal, and academic experts.	The main identified themes were social support, adherence to religious principles, belief in the sanctity of life, and aversion to invasive procedures, which were cited as factors deterring abortions.
3	Abdollahian (2008) ⁵	Qualitative study with a content analysis approach	In-depth interviews were conducted with 25 women in Tehran who had experienced abortion, aiming to explore the hidden social and cultural norms and values surrounding abortion.	The main themes of the study included cultural and institutional motivations for abortion, the impact of social factors, challenges related to contraceptive methods, consequences of induced abortion, psychological and cultural consequences, the taboo surrounding abortion, and the social belief system.
4	Shahbazi (2011) ¹⁹	Qualitative study with a content analysis approach	Participants included 27 experts in religion, politics, and law, as well as healthcare professionals and individuals who had experienced illegal abortions.	Five core concepts were identified: factors influencing decisions to reject or terminate a pregnancy, factors affecting the decision-making process, reasons for pursuing or discontinuing abortion, facilitated abortions, and the consequences of abortion.
5	Mortazavi (2012) ³⁵	Qualitative approach and group discussions	Focus group interviews were conducted with 23 pregnant women in their third trimester, and individual interviews were held with four women who had previously undergone abortions.	The results were categorized into four main themes: reasons for unintended pregnancy, reactions of others, the process of accepting unintended pregnancy and reasons for considering pregnancy unwanted.
6	Shahbazi (2012) ³⁸	Qualitative study with a content analysis approach	The study involved 27 participants, including women who had undergone illegal abortions and healthcare professionals (midwives, psychologists, and relevant physicians).	Four primary categories were identified: physical, psychological, socio-political, and legal consequences.
7	Hosseini Chavoshi (2012) ³⁹	Qualitative-quantitative study	The study was conducted in two phases. In the first phase, 5,526 married women aged 15-54 from three provinces—Yazd, Isfahan, and Gilan—and the city of Tehran were randomly selected, and data were collected regarding pregnancy outcomes and the history of contraceptive use. In the second phase, 200 women who had experienced unintended pregnancies in the past 5 years were randomly selected from Tehran and Rasht. Among them, 40 women who had undergone induced abortions were identified for in-depth interviews.	The extracted themes included social and economic concerns, emotional reactions, social stigma, feelings of guilt and distress, insufficient knowledge of the laws, and a need for revising reproductive health policies.
8	Ebtekar (2013) ³⁰	Qualitative study with a content analysis approach	Semi-structured, in-depth interviews were conducted with five married Kurdish women in Sanandaj who had a history of induced abortion.	The themes identified included financial difficulties, fear of societal judgment, pressure from partners, physical consequences of abortion, and post-abortion guilt and remorse.
9	Motaghi (2013) ²⁹	Qualitative study with a content analysis approach	A total of 72 semi-structured interviews were conducted, including eight experts, 28 married women, 10 women engaged to be married with a history of unintended pregnancies or unsafe abortions, and 12 healthcare providers.	For wanted pregnancies, reasons for abortion included fetal abnormalities, concerns about fetal health, distrust in diagnostic methods, fetal sex, and lack of decision-making autonomy. In the case of unintended pregnancies, reasons for abortion included socio-economic factors, beliefs and feelings, lack of family planning information, and easy access to abortion methods.

	Author, year, Reference	Methods	Sampling Method, Sample size	Findings
10	Hatamian (2014) ³¹	Qualitative phenomenological method	Semi-structured interviews were conducted with 28 married women who had undergone illegal abortions, selected through snowball sampling.	The extracted themes included the decision-making process surrounding abortion and women's roles within it, reasons for seeking abortions, and the influence of husbands and others on the decision-making process.
11	Bayrami (2014) ³³	Qualitative study using a phenomenological approach	10 in-depth semi-structured interviews were conducted.	Experiences of stress, psychological reactions, coping mechanisms, decision-making processes related to abortion due to unintended pregnancy, as well as changes in maternal and spousal roles, daily routines, and societal reactions were the primary and secondary themes identified in this study.
12	Mohammadi (2014) ³²	Qualitative approach with a descriptive-interpretive design	Unstructured, in-depth interviews were purposefully conducted with 29 participants.	Data analysis revealed two main themes: negative perceptions of the impact of abortion on life and violations of societal norms regarding childbearing, with a central theme revolving around perceived threats.
13	Kheiriat (2014) ³⁴	Qualitative Study	Using purposive sampling, in-depth, unstructured interviews were conducted with 30 participants—24 with direct experience and six with indirect experience.	The analysis revealed several themes, including the shame associated with societal norms around pregnancy, feelings of loneliness and perceived inadequate social support, and fear of adverse pregnancy outcomes. From these themes, twelve subcategories were identified.
14	Nourizadeh (2015) ²²	Qualitative study with a content analysis approach	Data were collected through 23 semi-structured interviews with 15 women who chose to continue their unintended pregnancies.	Data analysis identified four themes: negative and avoidance reactions, societal restrictions on abortion, religious values and beliefs, and post-decisional conflicts.
15	Peyman (2016) ³⁷	Qualitative study with a content analysis approach	In-depth interviews were purposefully conducted with 13 healthcare workers until data saturation was achieved.	Data analysis revealed three factors: service delivery system challenges, characteristics of service recipients, and the effectiveness of family planning methods in addressing unintended pregnancies.
16	Akbarzadeh (2016) ³⁶	Qualitative study with a content analysis approach	20 semi-structured interviews were purposefully conducted with participants who experienced unintended pregnancies.	The data analysis identified several themes, including embarrassment associated with pregnancy, lack of emotional support, anxiety about the child's future, feelings of guilt, conflict with partners, negative self-perceptions, concerns about divine retribution, financial, social, and relationship problems, and suppression of the logical expectations of other children.
17	Razeghi (2017) ⁴	Qualitative study with a content analysis approach	Data were collected via semi-structured interviews with 50 women divided into two groups: single women (including those without legal spouses or those in the engagement period) and married women with children who sought abortions.	The extracted themes included abortion as part of a cost-benefit assessment and the avoidance of potential future risks and harms.
18	Nourizadeh (2017) ²⁷	Qualitative-sequential exploratory mixed method	31 in-depth semi-structured interviews were conducted with 23 participants.	Analysis of the 27 final items identified four strategic factors: justification avoidance, resistance to acceptance, analytical strategies, and confirmation strategies.
19	Mohammadi (2018) ²¹	Qualitative content analysis	Unstructured interviews were held with 23 women aged 18-48 who had experienced unintended pregnancies.	Four themes emerged from the data analysis: disbelief and negative emotional responses, fragile justifications, perceived support, and post-decisional dissonance.
20	Nourizadeh (2020) ²⁰	Qualitative study	29 in-depth semi-structured interviews were purposefully conducted with 23 participants aged 18-48 years.	Data analysis identified four core categories: ambivalent resistance, perceived threat, resources and values influencing decision-making, and decision acceptance and confirmation.
21	Mokhtari Nia (2022) ⁴⁰	Qualitative grounded theory	Semi-structured interviews were held with 23 women with the experience of unintended pregnancies who were selected purposefully.	The analysis revealed the following themes: dissatisfaction with government interference, feelings of regret, and experiences of coercion related to pregnancy.
22	Azadvari (2023) ²³	Qualitative grounded theory	Interviews were conducted with 28 women from diverse social groups concerning age and socio-economic status.	Data analysis revealed that abortion was understood as a process of confronting fear and making choices.

The second main theme, “The decision-making process surrounding unintended pregnancies,” comprised avoidance reactions, socio-economic considerations, psycho-social conflicts in the decision-making process, and belief in maternal role and the value of preserving fetal life. These categorized themes and sub-themes are outlined in table 3.

Facing an Unintended Pregnancy

The first theme included facing an unintended pregnancy and consists of three sub-themes:

1. Emotional-Affective Fluctuations

The majority of the studies included in this meta-synthesis indicated that Iranian women underwent intense emotional and psychological

challenges upon confronting an unintended pregnancy, including feelings of fear, anxiety, guilt, and emotional dependence on the fetus.^{21, 23, 32, 33, 35, 36} Commonly reported negative responses encompassed heightened anxiety and stress, embarrassment, worry for the fetus and existing children,^{5, 36} sadness, anger,³¹ obsessive thoughts, fear of future implications,²³ shame, regret due to cultural pressures, social stigma,³⁴ and negative attitudes towards the fetus.^{20, 26, 36}

For instance, one participant expressed, “I felt that there was something in my body that I wanted to get rid of, I didn’t like it, and I hated it.”²¹

Moreover, the emotional reactions of women were found to be influenced by their religious beliefs, with individuals holding strong religious

Table 3: The themes and sub-themes categories

Themes	Categories	Codes
Facing an unintended pregnancy	Emotional-affective fluctuations ^{22, 31, 34-36}	Emotional distress (guilt and shame, depression, feelings of crying, anger, Fear and anxiety; hopelessness and depression) Self-hatred towards oneself, partner, fetus Feelings of happiness or liberation Impulsive decision-making
	Societal norms ^{4, 5, 23, 28-30}	The societal attitude towards childbearing Religious beliefs regarding childbearing in society Pregnancy outside of marriage; pregnancy during engagement The illegality of abortion within society Cultural beliefs about abortion, the social stigma associated with abortion
	Access to health services ^{22, 29, 33, 37}	Childbirth-related health policies Access to contraceptive methods Availability of counseling for unintended pregnancies Inadequate education and ineffective counseling Men’s low participation in counseling Spousal opposition to the use of contraceptive methods
The decision-making process surrounding unintended pregnancies	Avoidance reactions ^{5, 20, 22, 23, 31, 34, 35, 38}	Initial resistance (lack of acceptance of pregnancy, Concealment of pregnancy) Social isolation Seeking solutions and traditional efforts for abortion Justifications The right to choose regarding pregnancy decisions Concerns about the future Blaming the partner Negotiating with the partner for obtaining consent for decision-making Judicial consequences
	Socio-economic considerations ^{4, 21, 28, 29, 40}	The role of family, partners, and relatives Sex norms The educational level of the couple The two fertility age brackets Cost-benefit analysis Psychological costs
	Psycho-social conflicts in the decision-making process ^{20, 26, 31, 32, 38-40}	Negative feelings towards the fetus Uncertainty in decision-making Impact on future fertility Changes in maternal and spousal roles and daily responsibilities Negative judgments from others Marital relationships Internal conflicts and conflict resolution strategies
	Belief in maternal role and the value of preserving fetal life ^{19, 20, 26, 27, 34, 35, 39}	Decreased resistance Adjustment to unintended pregnancies through positive affirmations Religious beliefs Maternal roles High self-confidence Surrendering to God’s will Feelings of shame, regret, and remorse regarding abortion thoughts Fear of divine wrath

convictions reporting higher levels of guilt and anxiety.²⁶

2. Societal Norms

The findings from four studies indicated that attitudes toward unintended pregnancy and abortion among Iranian ethnic groups were diverse and heavily influenced by religious, cultural, and social beliefs.^{22, 26, 27, 38} Religious convictions, in particular, were identified as a significant barrier to abortion.³⁹ Moreover, the prevailing negative societal attitudes towards abortion in Iranian culture contributed to the stigmatization of women who selected to terminate a pregnancy, resulting in profound feelings of guilt, blame, and shame. This societal outlook prevented women from openly discussing their experiences due to fear of judgment and social rejection.^{5, 23, 28, 39}

Several studies highlighted that pregnancies occurring at advanced maternal ages, those exceeding the socially accepted number of children, or those with intervals between births deemed too short or too long, frequently evoked feelings of shame, stigma, and social pressure. Consequently, many women resorted to seeking secret and illegal abortions. Burdened by these societal expectations, women might also withdraw from social engagements.

Religious constraints further exacerbate these emotions, intensifying the sense of shame and stigma associated with such pregnancies.^{4, 28, 30, 33, 34, 38, 39} Pregnancies during engagement are considered particularly taboo across various ethnic groups, and, in extreme cases, result in suicidal ideations.^{4, 21, 23, 36}

One participant stated, *"When I discovered I was pregnant, I felt terrified. Although we were engaged, this situation posed a major challenge for our family... My fiancé was not supportive, which led me to believe I was facing this trouble alone.... if the pregnancy had not been terminated, I might have taken my own life."*²³

According to the results of four studies, pregnancies outside of formal marriage are notably condemned in Iranian society, fostering intense shame, social pressure, and a fear of negative judgment.^{4, 5, 23, 28} The apprehension of social rejection, coupled with pressure from family traditions and the fear of bringing dishonor, often leads to isolation, psychological distress, and a critical lack of familial support for the women involved.^{19, 23}

3. Access to Health Services

The findings underscored that Iranian women, upon realizing an unintended pregnancy, typically seek assistance from midwives, health advisors,

and physicians for guidance on abortion.^{21, 22}

Four studies reported that concerns regarding fetal abnormalities emerged as a common worry among women, emphasizing the crucial role of healthcare providers in providing adequate information to alleviate these anxieties.^{4, 21, 28, 29} A lack of empathy and insufficient provision of information from health providers could result in women making unsafe abortion decisions fueled by uncertainty and anxiety.^{32, 35}

One participant expressed her frustration: *"The thought of having the Intrauterine Device (IUD) attached to the placenta frightens me. Midwives and healthcare providers assure me that nothing will go wrong, yet their reassurances feel hollow. They fail to provide any logical reasoning or examples, such as sharing stories of others who have had the same experience without harm. I have visited this place numerous times, often in tears, but the staff has responded with cold and indifferent behavior."*²¹

The studies stressed the pressing need for improved access to healthcare and counseling services for women facing unintended pregnancies. Recommendations included enhancing the quality of family planning services, promoting counseling services, and involving men in family planning initiatives to reduce the incidence of unintended pregnancies. Additionally, three studies underscored the requirement for reforming abortion legislation and improving the healthcare system in Iran.^{19, 33, 37}

The Decision-Making Process Surrounding Unintended Pregnancies

The second theme included the decision-making process surrounding unintended pregnancies and had four sub-themes.

1. Avoidance Reactions

Several studies revealed that women faced with unintended pregnancies exhibited a range of psychological reactions, such as crying, anger, severe anxiety, mental turmoil, worry, and depression, as they grappled with the initial shock and lack of acceptance. Subsequently, many women explored ways to conceal their pregnancies and sought solutions for abortion from various sources.^{22, 31-33, 35, 36} As detailed across five studies, women might hastily opt for abortion at the onset of pregnancy, resorting to diverse informal methods ranging from traditional to contemporary ones, depending on their level of awareness.^{5, 23, 33, 34, 36} Even among religious women, a significant perspective opposed accepting an unwanted child and supported abortion.^{32, 35}

One participant reported: *"I tried to find a*

person or a place for abortion, and I asked the people around me to prepare medicinal and herbal remedies for abortion. I ate saffron, rose water, or some other herbs to help me have an abortion. Now, I am worried about my child because of using these herbs."³⁶

Furthermore, Mohammadi's study underscored women's pursuit of strategies to avoid unintended pregnancies, often influenced by economic and social circumstances.³²

2. Socio-Economic Considerations

Findings indicated that Iranian women, after encountering unintended pregnancies, consider abortion decisions through a cost-benefit analysis that weighs potential risks. When continuing a pregnancy threatens adverse changes in social standing or when the anticipated financial burden of child-rearing exceeds available resources, the inclination towards abortion intensifies.^{4, 21, 30} Nourizadeh highlighted one participant's concerns regarding financial instability and low income and underscored the influence of socioeconomic factors on these decision-making processes.²⁰

One participant stated: *"My husband did not have a stable job, and our income was low, which led to financial difficulties. This situation has caused me considerable concern, as we are feeling significant pressure in our daily lives."*²⁰

Moreover, the findings of the studies emphasized that women in risky situations, such as those involving illegitimate pregnancies, partners' substance abuse, familial conflict, financial hardships, or male disengagement, often view abortion as a pragmatic solution to avoid predictable consequences. These women assess the costs of continuing the pregnancy against those of abortion, with the latter frequently deemed more feasible.^{4, 20, 23, 28, 40}

Beyond economic considerations, social support emerged as a critical element influencing decision-making. Notably, familial and spousal support played vital roles in navigating unintended pregnancies. The absence of such support could intensify feelings of isolation and anxiety, particularly for women managing multiple responsibilities alone.^{35, 39, 40}

Another participant explained: *"My husband's job requires him to work two shifts most of the time... He is rarely at home, so all the responsibilities fall on me... I don't want to have another child."*³⁹

Studies highlighted that spousal involvement was more significant than support from friends or health providers in reducing anxiety and promoting adaptation to unintended pregnancies.^{26, 36} Encouraging greater paternal

involvement in childcare responsibilities and reducing marital conflicts were proposed strategies to mitigate the negative effects of unintended pregnancies.^{35, 40} Women who concealed abortions due to fear of societal judgment and avoided seeking social support were more vulnerable to pronounced loneliness and depression.³⁶

3. Psycho-social Conflicts in the Decision-making Process

Several studies illustrated how Iranian women experiencing unintended pregnancies often grapple with deep-seated doubts regarding whether to proceed with an abortion or continue the pregnancy.^{27, 33, 40} These uncertainties were influenced by the presence or absence of social and economic support, as well as perceived physical, psychological, social, and religious threats. Psychological challenges encompassed concerns regarding the physical consequences of abortion, feelings of guilt, disruptions to maternal and spousal roles, and implications for marital relationships.^{31, 34}

One participant noted: *"When my sister learned of my pregnancy, she reacted with anger and placed blame on me, even suggesting that I terminate the pregnancy. However, both my mother and mother-in-law defended me, advising her not to interfere and to allow me to make my own decisions."*³²

Moreover, three studies reported that apprehensions surrounding negative reactions from family and society, coupled with conflicts with religious beliefs, further compound this ambivalence.^{5, 27, 34}

4. Belief in the Maternal Role and the Value of Preserving Fetal Life

This meta-synthesis found that many women cited psychological unreadiness to assume the responsibilities of motherhood as a primary reason for resisting acceptance of the fetus, particularly when young or experiencing financial hardship.^{29, 32, 36, 38} Social and cultural pressures, intertwined with societal and familial expectations, further contributed to feelings of inadequacy and unreadiness, prompting a desire for abortion. Concerns about substantial changes to their personal and professional lives, coupled with feelings of inadequacy in their ability to care for a child, often exacerbate this desire.^{4, 33, 35}

One participant explained the societal pressure: *"According to the norms of our society, motherhood is a natural and desirable role for women. Therefore, abortion in unwanted pregnancies is often viewed as an unnatural and*

wrong act, because it is assumed that pregnant women should inherently wish to retain their own child."³⁶

The synthesis of the second theme and its sub-themes revealed that unintended pregnancy presented a significant challenge for Iranian women, characterized by avoidance reactions, complex decision-making processes, psychosocial conflicts, and deeply held beliefs regarding the maternal role. Furthermore, Iranian women, while considering religious values and socio-economic support, attempt to choose a course of action that minimizes harm and maximizes social acceptance.

Discussion

This review examined qualitative studies exploring the experiences of Iranian women facing unintended pregnancies and contemplating abortion, aiming to provide a comprehensive understanding of this complex issue.

The meta-synthesis highlighted that unintended pregnancies and abortion decisions among Iranian women were intricately influenced by a variety of social, cultural, economic, and religious factors, as well as legal regulations. This intricate web of influences contributed to the complexity of women's decision-making processes. Despite legal and religious restrictions surrounding abortion in Iran, a significant number of women opted for this procedure to terminate unintended pregnancies. Statistics suggested that approximately 40-60% of unintended pregnancies ended in abortion.^{6, 41} The decision to continue a pregnancy or seek an abortion is contingent upon individual circumstances, access to accurate information, and adequate health services.^{6, 8, 38, 41} Moreover, restricted abortion laws could lead to physical and psychological consequences for women and impose economic and social burdens on health systems.^{4, 41}

The results of seven studies highlighted the prevalence of negative emotions and psychological challenges experienced by Iranian women upon discovering an unintended pregnancy. Initial reactions often included a spectrum of negative emotions, such as distressing thoughts, nightmares, distress, worry, and intense psychological turmoil.^{20, 21, 32-36} Furthermore, women grappled with feelings of guilt,^{33, 35} heightened anxiety and stress, emotional dependence on the fetus, reduced maternal-fetal attachment,^{6, 42-45} negative attitudes towards the unborn child,^{20, 26, 36} and diminished self-efficacy in childcare practices.^{34, 46} Maghalian and colleagues emphasized

that maternal anxiety during unintended pregnancies might negatively affect maternal-fetal attachment, potentially leading to adverse outcomes, such as premature birth, low birth weight, small-for-gestational-age infants, and reduced fetal head circumference.^{43, 47}

The negative feelings surrounding unintended pregnancies and abortion in Iranian women are significantly shaped by religious beliefs, cultural norms, and societal expectations.^{4, 5, 26, 28, 31, 34, 48, 49} Religious convictions were cited as a primary deterrent to intentional abortions,^{22, 28, 30, 39} while women with higher educational levels and lesser religious adherence were reported to undergo more abortions.^{3, 50, 51} Feelings of obligation to the fetus, guilt, moral turmoil, apprehension of physical consequences, and fears of divine retribution contributed to their hesitance to terminate a pregnancy.^{21-23, 28, 33, 34}

The emotional distress and physical consequences arising from religiously-induced guilt following an abortion compel women to seek ways to mitigate these effects through acts such as making vows, monetary offerings, and seeking repentance.^{19, 23, 31} Despite this, many Iranian women choose to conceal their abortion experiences due to social stigma and religious convictions.^{19, 23, 31, 39} Factors such as reaching the desired number of children or experiencing pregnancy at an advanced age can trigger feelings of shame and prompt women to seek abortion discreetly. Additionally, when access to abortion is restricted or societal pressures and religious inhibitions are present, women may hide their pregnancies out of fear of being blamed or avoid social gatherings.^{3, 4, 34, 41, 50}

A study in Turkey indicated that individuals with strong religious beliefs generally opposed the notion of abortion.⁵² Similarly, research in Ghana and Nepal indicated that cultural and religious convictions significantly restricted women's attitudes toward abortion.^{53, 54} In the United States, Barkan found that despite the support from women's rights organizations for legal abortion, both men and women exhibited similar perspectives, and that religiosity remained a restraining factor against abortion rights.⁵⁵

Studies in the Netherlands indicated that despite legal access to abortion, women experienced fear and anxiety related to unpreparedness for motherhood and were concerned about social and economic consequences, leading to feelings of helplessness and fear of stigma.^{6, 56}

In Iran, a significant challenge for women with unintended pregnancies is the lack of access to abortion counseling services. The public health system does not offer pre- or

post-abortion counseling or support for women seeking induced abortions. These women are typically referred to hospitals only in cases of severe complications resulting from medication misuse or incomplete abortion procedures.³⁹ This lack of support can detrimentally impact women's physical and mental health. Separate reviews reported that restricted access to reproductive health services and restricted abortion laws increased unsafe abortion practices, particularly among women who have reached their desired number of children and those from lower economic backgrounds, who were disproportionately at risk.^{41, 57}

The studies underscored several additional challenges, including health policies, limited access to contraceptives, inadequate counseling resources for unintended pregnancies, insufficient education, ineffective counseling, and the unavailability of male counseling services in healthcare centers.^{33, 37, 41, 58} Peyman's research indicated that a lack of understanding and acceptance towards clients, societal influences on service recipients' beliefs and choices, and spousal opposition to family planning significantly contributed to unintended pregnancies.³⁷ Additionally, societal stigma surrounding abortion often compelled women to conceal their situations, adversely impacting their ability to seek necessary medical care.⁴⁶

In a study exploring women's experiences with unintended pregnancies in low-income countries, Crooks found that improving access to counseling and health services could enable women to make more informed decisions regarding their circumstances.⁵⁹ However, a lack of knowledge and skills among healthcare providers remained a significant barrier to achieving optimal support, with fears of mistreatment further preventing women from seeking necessary care. Research by Sewpaul in South Africa and Apolit in Uganda highlighted that experiences of mistreatment, discrimination, judgment, violence, and physical aggression exacerbated the negative experiences of women facing unintended pregnancies.^{60, 61}

The current meta-synthesis indicated various avoidance reactions among women facing unintended pregnancies, including initial resistance, denial and concealment of the pregnancy, social isolation, rationalization, blaming partners, and negotiating with spouses for abortion consent.^{23, 26, 32, 62} Other employed strategies included attempts to obtain abortions through chemical agents, traditional herbal remedies, or physical measures to terminate the pregnancy.^{5, 23, 31, 34, 36} Atuhaire's research reported that African teenagers dealing with

unintended pregnancies often resorted to self-administered drugs, ingest unsafe substances, utilize sharp instruments, and frequently seek aid from traditional healers.⁶³

Economic issues rank among the most prevalent reasons for seeking induced abortions following unintended pregnancies in Iran,^{4, 5, 21-23, 28, 29, 36, 39, 49} often accompanied by a lack of familial and spousal support,^{4, 34} inadequate physical and mental readiness,³⁵ negative self-image, and fear of adverse emotional consequences in marital relationships.³²

Pereira's study in Portugal found that adolescents often resorted to abortions due to educational commitments and a lack of maturity, whereas adults were inclined to pursue abortions for economic reasons.⁶⁴ Holten reported that, despite abortion being legal in the Netherlands, women encountered significant barriers to accessing abortion services, including societal taboos and a lack of autonomy in decision-making.⁶⁵

In a review of 27 countries, Bankol identified socio-economic concerns as the predominant factors affecting women's decisions to have abortions, including lack of support, poverty, unemployment, and the financial inability to raise additional children.⁶⁶ Conversely, Wilson highlighted that Mexican women often planned to continue pregnancies based on the desire to provide a good life for their children and to ensure a happy family environment.⁶⁷

In Iran, the negative attitude of women's close relatives, especially husbands, mothers, and mothers-in-law, deeply affects their decision-making processes.^{33, 35} Furthermore, spousal support plays a crucial role in helping women cope with the psychological challenges associated with accepting an unintended pregnancy.⁶⁸ Similarly, a review by Strong indicated that men's involvement in sub-Saharan Africa significantly influenced women's decisions about continuing pregnancies or opting for abortions.⁶⁹ Loll noted that men tend to hold more negative views towards abortion, posing additional obstacles for women.⁷⁰ In another review, Lie explored how husbands' attitudes influenced women's choices during unintended pregnancies.⁷¹ Goodwin emphasized that social and economic support from husbands, family, and friends was crucial in facilitating women's decision-making.⁷² Additionally, a partner's positive attitude toward abortion was identified as a factor affecting the occurrence of illegal abortions among Iranian women, with some studies reporting that women experienced pressure from their partners to terminate their pregnancies.^{4, 30, 31}

Crooks and colleagues reported that in certain

regions of South Asia, the Middle East, North Africa, and South Africa, mothers-in-law and spouses often served as the ultimate decision-makers regarding unintended pregnancies.⁵⁹

Social and cultural norms that deem abortion a taboo deter Iranian women from openly discussing their experiences with abortion, further exacerbating feelings of guilt and shame. In Iran, pregnancy outside of legal marriage or prior to formal marriage is particularly stigmatized and often associated with feelings of shame and social pressure. Similarly, studies in the United States highlighted that young women seeking abortions frequently faced negative judgments and derogatory labels. This social stigma is a significant factor influencing women's decisions to pursue unsafe abortions.⁷³

Rugema and others found that in Ghana, a lack of trust between women, men, and health providers regarding abortion, arising from the patriarchal structure of society, led women to conceal their abortions from their husbands.⁷⁴ Evidence suggested that partner support is critical in women's decision-making, as men may provide essential financial and physical resources, or support the decision to continue a pregnancy.^{4, 74} Moreover, social support has been positively associated with women's self-efficacy.^{46, 75}

The absence of emotional support for Iranian women facing unintended pregnancies adversely influences their mental health and the quality of mother-infant interactions, leading to diminished self-confidence, reduced self-efficacy, and an impeded capacity to embrace motherhood.^{42, 45, 46, 76}

Following an abortion, women who were nurturing a fetus might experience grief that extends beyond the scope of the unintended pregnancy.⁷⁷ Psychological and emotional challenges arising from unplanned pregnancies can negatively influence the development of a positive maternal identity and hinder the establishment of a nurturing bond with the newborn. In Iranian culture, motherhood is a fundamental aspect of women's traditional identity, and abortion is perceived as a deviation from the expectation that women inherently desire to retain their children.⁵ Consequently, Iranian women face complex intra-personal, moral, and religious dilemmas when contemplating abortion. Key factors contributing to their reluctance include conflicts with maternal identity, self-efficacy, feelings of obligation to the fetus,^{20, 32} guilt, moral turmoil,²² reliance on divine will, repentance for thoughts about abortion, fears of divine punishment, and concerns about the physical risks³² associated

with the procedure.

In the United States, Hoogen remarked that women's perception as "good mothers" played a significant role in their decision-making process regarding abortion.⁷⁸ A study conducted in the Netherlands showed that women with unintended pregnancies who decided to proceed with their pregnancies often possessed strong maternal identities and high self-confidence, and benefited from supportive partners.⁶

The findings of the present study showed that the decision to continue a pregnancy was deeply connected to a strong emotional bond with the fetus, a sense of duty toward the unborn child, and a desire to ensure its well-being. Social support from partners, family, and the community empowered women to manage the challenges of an unintended pregnancy. However, societal stigma, limited access to reproductive healthcare, and socioeconomic pressures contributed to emotional distress and hindered informed decision-making. To reduce stigma, policymakers should increase public awareness and challenge negative perceptions through media and educational campaigns. These combined factors critically shape women's experiences and choices regarding unintended pregnancies.

While this review conducted a comprehensive analysis of qualitative studies on unintended pregnancy and induced abortion in Iran over the past two decades, a key limitation was the lack of research involving sexually active single women. Additionally, limited access to full-text articles restricted the inclusion of some potentially relevant studies.

Conclusion

This study demonstrated that the decision to continue a pregnancy was frequently intertwined with a strong emotional bond to the developing fetus, a profound sense of responsibility towards the unborn child, and a deep desire to ensure its well-being. Furthermore, strong social support from partners, family, and the community played a pivotal role in enabling women to embrace motherhood and navigate the challenges associated with an unintended pregnancy. However, the study emphasized the significant impact of societal stigma, limited access to comprehensive reproductive healthcare services, and socioeconomic pressures. These factors could contribute to significant emotional distress and hinder women's ability to make informed, autonomous decisions regarding reproductive health. To mitigate social stigma, policymakers should increase public awareness

and challenge negative perceptions through media campaigns and educational programs.

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Authors' Contribution

L.E.: Conceived the study design and methodology, conducted the literature search, and performed the data extraction and statistical analysis. Drafted the initial manuscript and revised it critically for important intellectual content; A.K.: Supervised the overall project, coordinated the contributions of all authors, and ensured adherence to ethical standards. Reviewed and edited the manuscript for clarity, coherence, and completeness; M.R.R.: Assisted in the development of the study protocol, contributed to the interpretation of the results, and provided feedback on the manuscript. Conducted additional analyses and ensured the accuracy of the data; M.F. and G.S.B.: Contribution to the design and conduction of the study. All authors have reviewed the last version and read and approved the final manuscript and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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