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Original Article

Women's Satisfaction with Preconception Care and Childbearing Counseling Services: A Cross-Sectional Study

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Abstract

Background: Women's satisfaction with fertility counseling and preconception care is a key indicator of the quality of reproductive health services. This study aimed to assess satisfaction levels and their determinants among women of reproductive age attending urban Comprehensive Health Service Centers in Shahroud, Iran.

Methods: A cross-sectional study was conducted from May to December 2022 involving 319 women selected through multistage sampling from all 10 urban health centers in Shahroud County. Data were collected immediately after preconception care visits using a validated 35-item questionnaire covering two domains: childbearing counseling (11 items, score range 11–55) and preconception care (24 items, score range 24–120). Scores were converted to percentages and categorized as low (<51%), moderate (51–75%), or high (>75%) satisfaction. Statistical analysis was performed using SPSS version 22.

Results: Mean satisfaction scores were 29.59 (8.34) for childbearing counseling (53.8%) and 56.59 (15.67) for preconception care (47.2%), indicating moderate to low satisfaction overall (total score: 86.18 (20.76), 49.2%). Highest satisfaction in counseling was for "husband's presence during counseling" (36.1% strongly agreed), and lowest was for "education was sufficient and understandable" (0.6% strongly agreed). In preconception care, the highest disagreement was with "ease of locating the service site" (64.9%), and the lowest strong agreement was for "midwife's behavior was polite" (1.3%). Key deficiencies included inadequate education, poor communication, unclear risk explanation, and structural barriers. Community health worker accessibility was noted as a relative strength.

Conclusion: Low satisfaction primarily stemmed from poor communication, insufficient education, and infrastructural challenges. Enhancing provider communication, educational quality, privacy, and multidisciplinary access is essential.

Implications for Nursing and Midwifery Preventive Care

- Provide individualized, clear education using pamphlets, booklets, and multimedia tools.
- Maintain client privacy and confidentiality during counseling sessions.
- Encourage open communication and respond actively to client questions.
- Participate in professional development to improve communication and counseling skills.

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Introduction

Reproductive health encompasses the biological processes, functions, and systems involved in reproduction throughout life [1]. It affirms individuals' rights to a responsible, satisfying, and safe sexual life, along with the freedom and capacity to decide if, when, and how often to have children [1]. Central to this concept is access to safe, effective, and acceptable contraceptive methods, as well as appropriate healthcare services enabling women to go safely through pregnancy and childbirth [2].

Furthermore, reproductive health acknowledges that women's needs extend beyond their reproductive years, with ongoing health issues related to the reproductive system remaining significant throughout life [3]. In Iran, the Healthy Reproductive and Childbearing Program was established to promote healthy fertility behaviors, encourage timely childbearing, and prevent infertility, thereby improving fertility rates [4].

Aligning with these objectives, the United Nations Sustainable Development Goals emphasize reducing maternal mortality and improving maternal health, all of which depend on effective reproductive health services [5]. The healthy reproductive program offers pregnancy planning and preconception counseling tailored to women's reproductive goals [6].

Ideally, both partners should be physically and mentally prepared for childbearing, with decisions informed by age and overall health status [7]. Professional organizations recommend that all women of reproductive age receive preconception care to improve pregnancy outcomes and women's health by preventing and managing risk factors that may affect pregnancy [8]. Preconception care should be integrated into primary healthcare, benefiting adolescents and young adults by promoting planned pregnancies [9,10].

Globally, significant unmet needs for family planning contribute to millions of unintended pregnancies annually [11]. Family planning services consequently play a crucial role in promoting preconception care, as planned pregnancies are associated with greater engagement with these services [12]. Counseling provides an essential opportunity to discuss the benefits of preconception care [13]. There is consequently a need for enhanced training in counseling skills for healthcare professionals to support fertility-promoting policies [14].

In recent years, Iran has implemented various initiatives to encourage higher fertility through providing reproductive health services at comprehensive health centers [15]. However, limited research exists on the quality of services in these settings. According to Donabedian's model, patient and family satisfaction are key outcome indicators reflecting care quality and effectiveness [16].

Objective

This study aimed to assess women's satisfaction with childbearing counseling and preconception care services provided in urban comprehensive health centers of Shahroud, Iran, and to identify key determinants influencing their satisfaction levels.

Methods

Study Design and Setting

This cross-sectional study was conducted from May to December 2022 at urban Comprehensive Health Service Centers in Shahroud, Iran. These centers provide integrated reproductive health services, including childbearing counseling and preconception care, within Iran's national primary health care network.

Study Population and Sampling

The study population comprised women of reproductive age (15-49 years) who attended the selected health centers for preconception care during the study period. The sample size was calculated based on parameters from Ghaffari et al.'s study [17], using a design effect of 1.3 to account for cluster sampling. The initial sample size of 245 was multiplied by the design effect, yielding a final sample of 319 participants.

A Multi-Stage Sampling Strategy Was Employed

1. All 10 urban health centers in Shahroud County were included

2. Proportional quotas were assigned to each center based on their registered population of reproductive-aged women
3. Consecutive sampling was performed within each center until quota fulfillment

Inclusion criteria were: Iranian nationality, permanent residence in Shahroud, reproductive age (15-49 years), literacy, Persian language fluency, and physical/mental capacity to complete the questionnaire. Exclusion criteria included: healthcare employment, infertility history, current pregnancy, diagnosed psychiatric disorders, or current psychoactive medication use.

Instruments

Data were collected using a researcher-developed questionnaire measuring satisfaction with the Healthy Reproductive and Childbearing Program. The instrument contained 35 items across two domains:

Preconception care (24 items, score range: 24-120)

Childbearing counseling (11 items, score range: 11-55)

Items used a 5-point Likert scale (1 = very dissatisfied to 5 = very satisfied). Domain scores were summed for an overall satisfaction score (range: 35-175). Satisfaction levels were categorized as: strongly dissatisfied/dissatisfied (0-25%), no opinion (26-50%), satisfied (51-75%), and very satisfied (76-100%).

Content validity was established through Lawshe's method (CVR ≥ 0.56) and Waltz & Bausell's criteria (CVI ≥ 0.70) by a 12-expert panel including obstetricians, senior midwives, and public health specialists.

Reliability was confirmed with Cronbach's alpha coefficients of 0.919 for pre-pregnancy care and 0.893 for fertility counseling. Confirmatory factor analysis demonstrated acceptable model fit (χ^2/df = 2.42, CFI = 0.93, TLI = 0.91, RMSEA = 0.056, SRMR = 0.048), confirming construct validity.

Data Collection Procedure

Eligible participants were approached immediately after their counseling sessions. After explaining study purposes and obtaining written informed consent, questionnaires were administered in private rooms. Literate participants self-completed the survey, while those with limited literacy were interviewed. Data collection required approximately 15-20 minutes per participant. Completed questionnaires were checked for completeness before secure data transfer.

Data Analysis

Data analysis was performed using SPSS version 22. Continuous variables were described using means and standard deviations, while categorical variables were summarized with frequencies and percentages. Satisfaction scores were calculated as percentages of maximum possible scores and categorized accordingly.

Results

The participants (N=319) had a mean age of 29.20 years (SD=7.79) and a mean duration of marriage of 9.13 years (SD=6.29). Most participants were housewives (61.4%), and the most common occupation among their husbands was self-employment (39.8%) (Table 1).

Among the participants, 69.6% had been pregnant between one and five times. Of those with a pregnancy history, 86.03% had experienced at least one childbirth, and 22.9% reported a history of abortion (Table 2).

The mean satisfaction score for childbearing counseling was 29.59 (8.34) (53.8% of the maximum score). For preconception care, the mean score was 56.59 (15.67) (47.2% of the maximum). The overall satisfaction score was 86.18 (20.76) (49.2% of the maximum), indicating moderate to low satisfaction levels (Table 3).

In childbearing counseling, the item "counseling conducted with husband present" received the highest agreement (36.1% strongly agree). In contrast, "sufficient and understandable education" received the lowest agreement (0.6% strongly agree). Only 19.4% of participants agreed that risks of delayed childbearing were clearly explained (Table 4).

Table 1. Demographic Characteristics of Participants (N = 319)

Characteristic	n	%
Occupation		
Housewife	196	61.40
Student	46	14.40
Employed	77	24.10
Spouse's occupation		
Laborer	75	23.50
Employee	76	23.80
Farmer/Rancher	17	5.30
Self-employed	127	39.80
Student	17	5.30
Unemployed	7	2.20
Education		
Illiterate	1	0.30
Literate (read/write)	1	0.30
Elementary school	31	9.70
Junior high school	65	20.40
High school/diploma	110	34.50
Associate's degree	30	9.40
Bachelor's degree	67	21.00
Master's degree	14	4.40
Spouse's education		
Elementary school	21	6.60
Junior high school	56	17.60
High school/diploma	119	37.30
Associate's degree	33	10.30
Bachelor's degree	63	19.70
Master's degree	23	7.20
Doctorate	4	1.30
Insurance coverage		
Yes	222	69.60
No	97	30.40

Table 2. Obstetric and Reproductive History of Participants (N = 319)

Characteristic	n	%
Underlying disease		
Yes	65	20.40
No	254	79.60
Treatment for disease (n = 65)		
Yes	56	86.20
No	9	13.80
History of pregnancy		
Yes	222	69.60
No	97	30.40
Pregnancy complications (n = 222)		
Yes	45	20.30
No	177	79.70
History of childbirth (n = 222)		
Yes	191	86.00
No	31	14.00
Premature birth (n = 191)		
Yes	26	13.60
No	165	86.40
Living children (n = 191)		
Yes	187	97.90
No	4	2.10
History of abortion		
Yes	73	22.90
No	246	77.10
Family history of congenital		
Yes	24	7.50
No	295	92.50
Contraception use		
Yes	147	46.10
No	172	53.90
Prior pregnancy planning		
Yes	250	78.40
No	69	21.60
Current pregnancy plans		
No current plan	144	45.10
Currently trying to conceive	67	21.00
Plan in 1-3 years	48	15.00
Plan in 3-5 years	43	13.50
Trying unsuccessfully	17	5.30
Reason for preconception care visit		
Self-referred	125	39.20
Health center invitation	116	36.40
Referred during other visit	78	24.50
Previous preconception care		
Yes	117	36.70
No	202	63.30

Table 3. Descriptive Statistics for Satisfaction Scores with Healthy Fertility Services (N = 319)

Domain	No. of items	Minimum	Maximum	Mean	SD	Possible range
Childbearing counseling	11	11	52	29.59	8.34	11-55
Preconception care	24	24	92	56.59	15.67	24-120
Total satisfaction	35	35	144	86.18	20.76	35-175

Table 4. Distribution of Responses Regarding Satisfaction with Childbearing Counseling (N = 319)

Item	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Counseling content					
Age conditions reviewed	22.88	45.45	16.88	10.99	3.80
Health conditions reviewed	18.50	37.90	24.80	16.60	2.20
Disadvantages of delayed childbearing explained	15.70	41.10	23.80	16.00	3.40
Disadvantages of having only one child explained	13.20	26.30	30.10	22.60	7.80
Effect of age on fertility explained	13.80	25.10	31.30	22.60	7.20
Counseling process					
Counseling conducted with husband present	7.20	11.90	13.50	31.30	36.10
Freedom of choice in reproductive decisions	24.08	38.56	22.28	13.49	1.59
Sufficient and understandable education	27.90	38.20	27.30	6.00	0.60
All questions answered adequately	17.60	28.20	35.70	16.00	2.50
Use of educational tools (pamphlets, videos)	10.31	10.71	14.41	35.74	28.83
Optimal duration of education	26.00	36.70	26.00	8.80	2.50

For preconception care, "ease of locating service site" received the highest disagreement (64.9% strongly disagree), while "midwife's polite behavior" received the lowest strong agreement (1.3%). Other items with low satisfaction included "short waiting time for care" (47.3% strongly disagree) and "maintained body coverage during examination" (64.9% strongly disagree) (Table 5).

No significant associations were found between satisfaction scores and age, occupation, delivery type, or parity ($p>0.05$). However, husband's occupation showed a significant association with satisfaction scores ($F=6.692$, $p<0.001$).

Discussion

The findings of this study indicate that women's overall satisfaction with preconception care and childbearing counseling services in Shahroud's urban health centers was below desirable levels. This is particularly evident in domains of educational adequacy, clarity of explanations, staff politeness, and accessibility of health services. These results reflect not only operational shortcomings but also deeper cultural, social, and organizational factors influencing women's perceptions of reproductive healthcare quality in Iran [18].

The higher satisfaction observed when counseling was conducted with husbands present aligns with Iran's family-oriented cultural structure, where childbearing decisions are typically made jointly [19].

This finding is consistent with previous research emphasizing that family participation enhances emotional support and psychological security for women during counseling sessions [20].

Only 19.4% of participants reported adequate explanations about risks associated with delayed childbearing, revealing significant educational gaps. Similar deficiencies in information delivery have been documented in other developing countries and are known to undermine women's trust in healthcare systems [21]. This educational shortcoming represents a critical area for improvement in service delivery.

Table 5. Distribution of Responses Regarding Satisfaction with Preconception Care (N = 319)

Item	Strongly disagree	disagree	Neutral	agree	Strongly agree
Facility and accessibility					
Easy to find a care location	64.90	22.90	7.80	4.10	0.30
Short waiting time for care	47.30	22.30	9.10	19.10	2.20
Suitable waiting space	45.80	21.60	11.60	17.90	3.10
Desirable examination room conditions	49.50	27.30	9.10	11.60	2.50
Suitable care room	49.80	22.90	11.90	13.50	1.90
Midwife-related care	16.60	24.50	32.90	24.10	1.90
Maintained body coverage during examination	64.90	22.90	7.80	4.10	0.30
Adequate guidance from a midwife	19.70	23.20	24.50	26.30	6.30
Easy to ask questions to the midwife	47.60	34.50	10.10	7.20	0.60
Confidence in the midwife's ability	44.20	28.50	23.20	3.40	0.70
Polite behavior from the midwife	55.80	32.30	6.90	3.80	1.20
Confidentiality maintained	24.50	23.20	39.50	7.20	5.60
Physician-related care					
Comfort during a physician visit	20.10	21.30	23.80	23.50	11.30
Physician's polite behavior	34.50	42.60	16.60	5.00	1.30
The physician listened carefully	17.90	15.70	27.60	26.60	12.20
Thorough examination by a physician	14.10	12.60	28.80	30.40	14.10
Explanation of required tests	27.90	39.50	25.10	5.00	2.50
Understandable explanations by the physician	27.30	28.20	34.20	9.10	1.20
Confidence in the physician's ability	22.60	19.80	18.80	26.30	12.50
Short waiting time for the physician	18.50	16.30	26.60	22.30	16.30
Opportunity to ask questions to the physician	30.10	31.30	27.30	8.80	2.50
Education					
Sufficient and understandable education	37.90	30.10	26.00	5.30	0.70
All questions answered	18.20	16.90	43.90	17.90	3.10
Use of educational tools	9.70	10.30	11.60	40.80	27.60
Optimal education duration	31.70	36.40	24.80	5.00	2.10

The high dissatisfaction with service accessibility and wayfinding difficulties highlights infrastructural limitations within the healthcare facilities. These findings are consistent with research from similar settings where physical infrastructure and administrative processes significantly impact patient satisfaction [22].

The low satisfaction with staff politeness (1.3% strongly agree) suggests underlying issues related to workload, staffing shortages, and insufficient training in interpersonal communication [23]. Previous studies have demonstrated that respectful and professional interactions are crucial determinants of satisfaction with reproductive health services [24].

The current findings align with earlier evaluations of Iran's Health Transformation Plan, which noted improvements in structural aspects but persistent weaknesses in educational and counseling components [25]. This suggests that even with standardized service delivery systems, the human and relational dimensions of care require focused attention.

Based on the findings of this study, women perceived preconception counseling not merely as medical advice but as a dynamic and interactive

process that guides informed reproductive decisions. Improving women's satisfaction, therefore, calls for a shift toward a more participatory and family-oriented counseling model—one that resonates with national reproductive health policies aimed at strengthening family life and encouraging healthy childbearing. Building trust through culturally sensitive and inclusive counseling can effectively contribute to broader national goals for fertility promotion. In summary, the study revealed a significant association between the husband's occupational status and women's satisfaction with fertility counseling and preconception care. This relationship underscores the crucial role of socioeconomic stability and spousal support in shaping the perceived quality of reproductive health services. Accordingly, adopting a family-centered, partner-inclusive approach in program planning and service delivery is essential for enhancing women's satisfaction and optimizing care outcomes.

This study has several limitations. The sample was restricted to women attending public urban health centers in Shahroud, potentially limiting generalizability. Self-reported data may be subject to recall and social desirability biases. Additionally, some cultural and interpersonal dimensions of satisfaction might not have been fully captured by the survey instruments.

Conclusion

The moderate to low satisfaction levels identified in this study primarily stem from insufficient education, weak provider-client communication, and structural barriers. While services provided by community health workers were viewed more favorably, significant gaps remain in both educational content and care processes. Quality improvement initiatives should focus on enhancing staff communication skills, developing culturally appropriate educational materials, and improving physical infrastructure.

Future research should employ qualitative methods to better understand the underlying barriers to satisfaction and evaluate targeted interventions to enhance both structural and process aspects of reproductive health services.

Ethical Considerations

This study received approval from the Ethics Committee of Shahroud University of Medical Sciences (Code: IR.SHMU.REC.1398.025). Written informed consent was obtained from all participants before their involvement in the study. Participants were assured of the confidentiality of their information, and the principle of anonymity was maintained throughout the research process.

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Conflict of Interest

The authors declare that there are no conflicts of interest associated with the publication of this research.

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Authors' Contributions

All authors made substantial contributions to this study. Ghaffari Sardasht F. was responsible for data acquisition, manuscript drafting, and revision. Sadeghi M. contributed to data collection. Keramat A. was responsible for the accuracy of implementation and interpretation of the study. All authors reviewed and approved the final version of the manuscript.

Artificial Intelligence Utilization

During manuscript preparation, minor assistance from artificial intelligence (AI) tools was utilized to enhance English phrasing and improve the clarity of scientific writing. All analytical decisions and final

editing were performed by the authors. The use of AI complied with ethical standards of academic publishing and did not replace author responsibility.

Data Availability Statement

The dataset supporting the findings of this study is not publicly available due to privacy regulations protecting participant confidentiality. However, the data may be made available from the corresponding author upon reasonable request. For transparency purposes, de-identified SPSS data files used in exploratory and confirmatory factor analyses are securely stored and can be shared for academic verification.

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