

Evaluation of reproductive health status among women referring to rural healthcare centers in Neyshabur (Iran) in 2017Khosheh Khaleghinezhad¹, Nourossadat Kariman², Fatemeh Nahidi², Abbas Ebadi³, Malihe Nasiri⁴

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Abstract

Background: Reproductive health is one of the most important aspects of life. Moreover, rural women constitute the largest demographic in society who are deprived of health services.

Objective: To determine the reproductive health needs of rural women of reproductive age.

Methods: This cross-sectional study was conducted on 405 rural women referring to the rural healthcare centers of Neyshabur, Iran, in 2017. The study population was selected through random multistage sampling technique. Data collection was carried out using a standardized questionnaire, evaluating sexual and reproductive health needs. Data analysis was performed using descriptive statistics in SPSS version 17.

Results: According to the results, 99.2% and 95.5% of the females received prenatal and postpartum healthcare, respectively. In addition, the rate of cesarean section was 30.25% among the rural women. The contraceptive pill was the most known birth control method (88.9%), whereas coitus interruptus was the most frequently used method (28.5%). Moreover, 59.8% of the rural women married at the age of ≤ 18 years. The most known sexually transmitted disease for these women was HIV/AIDS (81.7%), and just more than half of them had a history of colored vaginal discharge over the past 12 months (56.8%). Furthermore, these women reported 33.1% domestic violence over the past year.

Conclusion: The findings of the present study revealed the urgent need for planning programs to improve the reproductive health of rural women.

Keywords: Reproductive health, Sexual health, Women's health, Rural population

1. Introduction

The high importance of reproductive health in human societies has been globally recognized as part of human rights under the name of reproductive rights (1). Women's health directly affects the long-term programs of development in each country (2). Rural women constitute about one-third of the female population (37 million) in Iran (3). These females experience various aspects of discrimination and deprivation (4). Furthermore, according to the millennium development goals, rural women have improper conditions, compared to rural men and urban men and women (5). Regarding this, it is essential to accurately determine the unsatisfied health needs of these women to eliminate the shortages, and plan for better reproductive health services (6). Studies have indicated the low level of reproductive health in rural women compared to that in urban females (1). In this regard, among all maternal deaths occurring in

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Hormozgan province between 2005 and 2011, rural areas had the highest mortality rate (60.4%) (7). Another important issue in reproductive health is the coverage of family planning methods. Unwanted pregnancy is regarded as an important general health problem due to its adverse outcomes for maternal and fetal health (8). According to statistics, the prevalence of unwanted pregnancy has been estimated as 30.6% in Iran (9). However, in a study conducted by Zamani, 42% of the rural women in Najafabad town experienced unwanted pregnancy (10), which is a sign of the widespread occurrence of this problem in rural women. Moreover, Zare affirmed that adolescent girls living in rural areas have a higher marriage and childbearing rate, compared to those in urban regions (11). Early marriage, lack of knowledge and information about sexual and reproductive health have led to increase in the vulnerability to HIV and other sexual and reproductive health risks (12). All of the mentioned issues create the underlying foundations for reproductive health risks in rural women. However, there are limited studies investigating the various dimensions of sexual and reproductive health in rural women. Villages are the most deprived regions in terms of health and hygiene. Therefore, it is fair to pay more attention to these areas, especially the vulnerable group of rural women. With this background in mind, the present study aimed to determine the reproductive health needs of rural women at fertility age in order to provide an opportunity for designing effective programs targeted toward the improvement of reproductive health among this population.

2. Material and Methods

2.1. Study population

This descriptive, cross-sectional study was conducted on rural women, who referred to the rural healthcare centers of Neyshabur, Khorasan Razavi, Iran, from January to April 2017. The sample size was determined as 405 cases considering type I error 0.05, proportion 0.5, degree of confidence 0.05%, and 5% sample loss.

2.2. Sampling area and study design

Khorasan Razavi is the second populous province in Iran. Neyshabur is the second largest city in Khorasan Razavi province after Mashhad (provincial capital) (3). Neyshabur consists of four parts, each of which was regarded as a cluster. A list was provided from the villages of each cluster, and some villages were randomly selected through simple random sampling method in proportion to the covered villages. A total of 36 villages were randomly selected from four districts, including Central District 16, Zebarkhan District 9, Mianjolgeh District 6, and Sarvelaiat District 5. Subsequently, purposive sampling technique was carried out in each of the selected villages. The questionnaires were filled out by the researcher through interviews implemented in a calm and private environment at the rural healthcare center.

2.3. Selection criteria

2.3.1. Inclusion criteria

The inclusion criteria were: 1) age between 15 and 45 years, 2) married status and living with husband, 3) permanent residence in the village (more than one year), and 4) lack of any known physical or psychological illnesses.

2.3.2. Exclusion criteria

The exclusion criteria included the unwillingness of the participants to continue the interview.

2.4. Data collection

The data were collected using the Sexual and Reproductive Health Needs Assessment Questionnaire, which was designed by New Dimension Consulting for the International Organization for Migration and the United Nations Population Fund to be used among the mobile and vulnerable populations in Zimbabwe (13). This instrument consists of seven sections, including background information, safe motherhood, family planning, sexual behaviors, sexually transmitted infections, HIV/AIDS, as well as physical and sexual violence. The validity and reliability of the mentioned questionnaire was confirmed in Iran by Khani in 2015. The English questionnaire was translated into Persian through decentered or symmetric translation method. The process of cultural and social considerations and adaptation was supervised by the researcher throughout all phases of the study. The content validity index was higher than 0.8 for all items. In addition, the face validity (qualitative and quantitative), content validity (qualitative and quantitative), and reliability of the questionnaire have been approved (14). In this study, the reliability of the questionnaire was assessed using the test-retest method. A total of 40 women completed the questionnaire twice in 2-week intervals. The intra-class correlation coefficient (ICC) values were ≥ 0.87 .

2.5. Ethical considerations

The present study was approved by the Ethics Committee of Shahid Beheshti University of Medical Sciences (code: IR.SBMU.RETECH.REC.1395.588). Informed consent was obtained from all participants. In addition, all subjects were assured of the confidentiality of their personal information.

2.6. Statistical analysis

Data analysis was performed using descriptive tests in SPSS, version 17 (IBM© Corp., Armonk, NY, USA).

3. Results

According to the results, the mean ages of the females and their spouses were 30.99 ± 6.55 and 35.60 ± 6.72 years, respectively. In terms of the education level, 179 (44.2%) subjects and 147 (36.3%) spouses had elementary education or lower. In total, 242 (59.8%) women and 294 (72.4%) of their spouses were aged ≤ 18 and ≤ 24 years, respectively. Moreover, 340 (84.0%) subjects were housewives, while 305 (75.3%) spouses were simple workers, farmers, or animal husbandries. The mean length of marriage was 12.99 ± 6.63 years among the subjects. The evaluation of decision-making in families indicated that the husband was the head of the family in 383 (94.6%) cases. Furthermore, purchase of home supplies was carried out by the husband in 312 (77.0%) cases. Decision-making about receiving medical care and issues related to sexual and reproductive health were carried out by 272 (67.2%) and 187 (46.2%) women, respectively. The history of pregnancy, childbirth, postpartum, breastfeeding and unwanted pregnancy is presented in Table 1.

Table 1. Evaluation of participants in terms of the history of pregnancy, childbirth, postpartum, breastfeeding, and unwanted pregnancy

Variables		Mean (SD) / n (%)		
	Number of pregnancies; Mean (SD)	2.3	1.3	
	Age at the first pregnancy (years); Mean (SD)	20.8	3.7	
	Number of prenatal cares; Mean (SD)	7.1	3.0	
	Duration of the first prenatal care (months); Mean (SD)	1.8	0.8	
	Visit for obtaining prenatal care; n (%)	371	99.2	
	The most common risk factors for pregnancy from the women's perspective; n (%)	Uterine bleeding	295	72.8
		Severe abdominal pain	245	60.5
	Provider of prenatal care services; n (%)	Behvarz	277	74.7
		Midwife	82	22.1
		Physician	10	2.7
		Others	2	0.5
	The most common cause of not receiving prenatal care; n (%)	Lack of adequate knowledge about services provided at healthcare centers	2	40
		Inability to pay the healthcare expenses	1	20
		Excessive distance to health center	1	20
		Personal unwillingness	1	20
	Complete tetanus vaccine status in the previous pregnancy; n (%)	326	87.9	
	Complete status of receiving supplements status in the previous pregnancy; n (%)	276	74.4	
A history of problems during pregnancy, childbirth, and postpartum; n (%)	138	36.9		
The most common problem occurring during pregnancy and childbirth; n (%)	History of bleeding during the first trimester	39	28.5	
Knowing 5 signs of risk symptoms during pregnancy; n (%)		99	24.4	
History of delivery; n (%)	Last delivery in a clean environment	355	99.7	
	Performing the delivery process by a trained individual	355	99.7	
	C-section to total number of pregnancies ratio	229	30.25	
History of Postpartum; n (%)	Receiving at least one postpartum care	338	95.5	
	The most common causes of not receiving postpartum care	Inadequate knowledge about services provided at healthcare centers	4	23.5
		Inability to pay the healthcare expenses	3	17.6
		Excessive distance to health center	2	11.8
Lack of public transportation		2	11.8	
History of breastfeeding; n (%)	Exclusive breastfeeding in the first six months of birth	323	91.8	
	The most common causes of non-exclusive breastfeeding in the first six months of birth	Causes related to maternal health	6	17.6
		Causes related to neonatal care	6	17.6
		Lack of belief in the adequacy of breast milk	4	11.8
		Others (e.g., busy mother, having twins, and lack of personal interest)	18	52.9

Table 2. Evaluation of the participants in terms of family planning and unwanted pregnancy

Variables		n	%
Family planning	The most known contraceptive method	Contraceptive pills	360 88.9
		Condom	353 87.2
		Contraceptive injections	325 80.2
	The most commonly applied method	Condom	216 53.3
		Contraceptive pills	185 45.7
	The most preferred method	Condom	92 22.7
		Intrauterine device	82 20.2
		Contraceptive pills	75 18.5
	Current non-use of contraceptive methods		79
The most commonly applied method currently	Coitus Interruptus	93	28.5
	Condom	85	26.1
Unwanted pregnancy	History of unwanted pregnancy in individuals		109 26.9
	History of using pregnancy termination methods by the individual		20 18.3
	History of using contraceptives before unwanted pregnancy		90 82.6
	The most common type of contraceptives used before unwanted pregnancy	Coitus interruptus	41 45.6
		Contraceptive pills	20 22.2
Condom		17 18.9	

Table 3. Evaluation of the participants in terms of women's knowledge, sexual performance, and self-report of the history of sexually transmitted diseases in the females and their spouses

Variables		n	%	
Knowledge of sexually transmitted diseases	The most known sexually transmitted diseases	HIV/AIDS	331 81.7	
		Candida (fungus)	197 48.6	
		Hepatitis	163 40.2	
	Symptoms of sexually transmitted diseases	Discharges with an unpleasant odor	296 73.1	
		Genital itching	293 72.3	
		Lower abdominal pain	285 70.4	
	The most well-known routes of HIV/AIDS transmission from the perspective of participants	Vaginal sexual intercourse	338 83.5	
		Reuse of syringe and needle	307 75.8	
		Blood transfusion	271 66.9	
	The most unknown routes of HIV/AIDS transmission from the perspective of participants	Breastfeeding	98 24.2	
		Oral sex	98 24.2	
	Believing that it is extremely rare or unlikely to be diagnosed with AIDS in the next year		229	56.5
	History of AIDS testing in the past year		4	1
Lack of information about the possibility of being infected with HIV/AIDS even with healthy appearance		152	37.5	
History of sexually transmitted diseases	History of colored or unclear vaginal discharges during the past 12 months in women		230 56.8	
	History of vaginal wound during the past 12 months in women		43 10.6	
	Searching for treatment of discharge or ulcer in genital area		198 84.3	
	The most common causes of non-referral for the treatment of sexually transmitted diseases	Lack of personal interest	24	57.1
		Shame	5	11.9
		Impropriety of the previous treatment	4	9.5
	History of genital wounds in the spouse or sex partner over the past 12 months		20	4.9
Searching for treatment by spouse or sex partner		10	50	
Sexual performance; Mean (SD)	Having several sex partners by the spouses of women		24 5.9	
	Start having sex at the age of ≤ 15 years		68 16.8	
	Mean age at the onset of sexual relations in women (years)		18.9 3.7	

The data related to family planning and unwanted pregnancy are reported in Table 2. Data related to sexually transmitted diseases, women's knowledge, sexual performance, and history of sexually transmitted diseases in females or their spouses is illustrated in Table 3. The most common cause of non-use of family planning techniques was current pregnancy or tendency toward pregnancy (n=66, 83.5%). In total, 303 (93.0%) participants learned

about family planning methods in healthcare centers. Regarding physical and sexual violence, 134 (33.1%) women experienced physical violence in the past year, which were mainly husband-to-wife cases (n=126, 94.0%). In more than half of the cases, the women discussed this issue with no one (n=68, 50.7%), the main cause of which was fear of bad reputation (n=32, 47.1%), creation of problems in their relationships (n=27, 39.7%), and uselessness of reporting or talking about domestic violence (n=23, 33.8%). The best strategies to avoid domestic violence against the women were reported to be educational programs for females (n=230, 56.8%), educational programs for males (n=216, 53.3%), psychological counseling (n=208, 51.4%), and religious counseling (n=128, 31.6%). Sexual violence was reported by 285 (70.4%) cases, which was mainly (n=283, 99.3%) imposed by the husband. Nevertheless, the subjects talked with no one about this issue in the majority of cases (n=219, 76.8%), which was mainly due to embarrassment and the commonness of this issue as reported by 133 (60.7%) and 66 (30.2%) females, respectively. The best solutions for the prevention of domestic violence against these women were proposed to be the administration of educational programs for females (n=259, 64.0%), female's avoidance from going to insecure places (n=222, 54.8%), psychological counseling (n=189, 46.7%), and implementation of educational programs for males (n=172, 42.5%).

4. Discussion

The present study aimed to evaluate various dimensions associated with reproductive health in rural women. These dimensions included safe maternity, family planning, sexual performance, sexually transmitted diseases, HIV/AIDS, as well as physical and sexual violence. According to the results, only a quarter of the women knew about at least five signs of prenatal risk. The majority of the subjects reported uterine bleeding and severe abdominal pain as the symptoms signifying a pregnancy risk. In a study conducted by Kabakyenga et al. (2011), 52%, 72%, and 72% of females were familiar with at least one major risk factor for pregnancy, childbirth, and postpartum periods, respectively. Only 19% of the participants knew about three or more risk factors for the mentioned periods. In this regard, minimum knowledge about one risk factor for pregnancy or childbirth had a statistically significant relationship with birth preparation (15). Therefore, the lack of information about pregnancy risk factors can be indicative of the women's unfavorable knowledge level about this domain. Based on the definitions, a minimum of six cases of prenatal care is regarded as adequate for a low risk pregnancy (16). Although 99.2% of the rural women received prenatal care, 29.1% of them had not received such care adequately. On the other hand, the quality and quantity of prenatal care in rural areas is more favorable than that in urban areas (16), which is mainly due to the presence of local health workers in these regions. Furthermore, the results were indicative of the acceptable rate of postpartum care. However, the high level of non-exclusive breastfeeding is indicative of the need for the provision of more education and facilities for more active women. The evaluation of the total childbirth status revealed the high prevalence of C-section among the rural women (30.25%), which is above the global standard (17). The rate of this procedure can be reduced by preventing unnecessary C-section (e.g., elective C-section). Khsravi et al. (2006) demonstrated a statistical relationship between the type of pregnancy and place of residence. In this regard, the urban mothers underwent C-section twice as much as the rural mothers (OR=2.22) (18). Moreover, the general health policies designed to promote natural delivery over the past few years has led to the reduction of C-section rate (19). Contraceptive pills and condoms were the most recognized birth control methods, and coitus interruptus and condom were the most applied methods by the rural women. However, knowledge and use of emergency contraceptive methods were at a significantly low level. In a study performed by Zanjani and Jazayeri (2014), the reproductive health showed a positive correlation with the level of knowledge about contraceptive methods after marriage, participation rate in family decision-making, and accessibility to contraceptives (1). Moreover, Sadri et al. (2011) asserted that the knowledge of the women, covered by family planning services, about complications, care, and follow-up of the contraceptives was not favorable (20). The results of this study were also indicative of the undesirable level of knowledge in the family planning domain. While the mean age of initiating sexual relations was 18.9 years and 16.8% of these women reported this age as 15 years and less.

Early marriage can lead to the elevation of unfavorable complications during pregnancy and childbirth. Adolescent females are at higher risk of violence and have lower involvement in making decisions about their reproductive health. Moreover, they are sometimes not allowed to receive healthcare treatment (21). These factors are indicative of the need of rural societies for effective measures in this regard. The rural women had limited knowledge about sexually transmitted diseases. Moreover, more than half of these women had a history of colored vaginal discharge. In addition, one fifth of these individuals did not refer to the healthcare centers to receive therapeutic interventions. These findings indicated the high incidence of sexually transmitted infections among rural women. Although Margdarinejad (2014) demonstrated that the place of residence had no significant association with candida and trichomonas infections (23), more information is needed in this area. After the evaluation of rural women's

knowledge about AIDS, only 57% of the women were familiar with more than half of the AIDS transmission routes. Additionally, 37.5% of these women selected the alternatives of “no” or “I do not know” when answering the question of “Can a person with normal appearance have AIDS?”. In a study conducted by Ashrafinia et al. (2014), the majority of the women were reported to have medium knowledge (55.2%) and positive attitude toward transmission routes and prevention of AIDS (95.8%) (25). This finding is consistent with those of our study, which was indicative of the need for more education in this area. On the other hand, physical and sexual violence was at a high level among rural women. In a study conducted by Sapkota et al. (2016), according to the participants’ self-report, the prevalence rates of physical violence were 29.6% and 15.2% during lifetime and in the past year, respectively (26). Moreover, Ali Kamali et al. (2015) demonstrated a significant difference between urban and rural pregnant women in terms of physical, mental, and sexual violence (27). Accordingly, they revealed that the rural women were exposed to more physical, psychological, and sexual violence. In the present study, domestic violence had a higher prevalence in the rural women than that in the urban females. This higher level of violence in rural areas is mainly due to women’s deprivations of some services and such risk factors as low education level, limited accessibility to sufficient financial resources, and communication limitations. Therefore, the reduction of these impacts must be prioritized. The limitations of this study included the implementation of sampling only in the rural healthcare centers. Furthermore, we did not use additional diagnostic tests. The strength of this study was the investigation of a topic in rural women that has been less studied in Iran.

5. Conclusions

The findings of this study indicated the need for planning the programs targeted toward the improvement of sexual and reproductive health among rural women. Further studies are recommended to investigate the needs of sexual and reproductive health in rural women in several provinces using a larger sample size and complementary diagnostic tests.

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Conflict of Interest:

There is no conflict of interest to be declared.

Authors' contributions:

All authors contributed to this project and article equally. All authors read and approved the final manuscript.

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