

Challenges and Needs of HPV-Positive Women

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Abstract

HPV is the most prevalent sexually transmitted diseases causing a variety of clinical manifestations ranging from warts to cancer. This study aimed to examine the challenges and needs of HPV-positive women. In this qualitative study, we analyzed data extracted from semi-structured face-to-face interviews with 31 Iranian HPV-positive women using a conventional content analysis approach using MAXQDA.10 software. Data were collected from her at the women's clinic from 21 January 2022 to her 19 February 2022. The sampling process was purposeful, and the accuracy of this study was ensured according to her 4 criteria suggested by Guba and Lincoln. Four themes were identified from the interviewing of HPV-positive women that include: Needing support and counseling to adapt to the disease, needing counseling and training to improve the disease, needing a qualified health care provider, needing proper health care services. HPV-positive women had many adverse such as reproductive health challenges (Menstruation cycle, delivery type, fertility, pregnancy, and breastfeeding), low control, confusion, cancer-related concerns, relationship problems, sexual concerns, uncertainty, stigma, low trust, social impact, non-disclosure of results, idiosyncratic prevention, indirect clinical interaction, changes in sexual behavior. HPV-positive women face many challenges and seek information to address them. Therefore, at the primary level, providers need to be aware of the needs of these patients needs in order to make the necessary consultations.

Keywords

reproductive health, human papillomavirus, qualitative research, sexually transmitted diseases, warts

What do we already know about this topic?

HPV is the most prevalent sexually transmitted infection causing a variety of clinical manifestations ranging from warts to cancer

How does your research contribute to the field?

This study aims to explore reproductive health challenges of Iranian HPV positive women. It gathers thus crucial information for public health planning in a Muslim Middle Eastern country. The framework may benefit from a more streamlined structure that distinguishes clearer between stigma and fears around the diagnosis of the HPV virus (which sexually transmitted is a precursor of cervical cancer diagnosis) but not necessary a “diseas”, and HPV virus as enabler of cervical cancer diagnosis. It would also be helpful to remind the reader that the HPV virus is extremely common and may resolve by itself and that cervical cancer may take years to develop

What are your research's implications toward theory, practice, or policy?

This primary prevention tool for cervical cancer could significantly reduce cervical cancer, In turn, failure to properly recognize the needs may lead to the imposition of economic costs in the healthcare system of the countries.

Introduction

Human papillomavirus (HPV) is the most common sexually transmitted disease.¹ The overall prevalence of HPV infection was 22.81%, with the infection rate of high-risk human papillomavirus (HR-HPV) was 19.02% and low-risk human papillomavirus (LR-HPV) was 6.40%² and in Iran in both genders hpv prevalence is (32.7% of total genotypes and 58.6% of LR genotypes).³ The manifestation of HPV is

benign self-limiting skin warts to malignant and invasive lesions (such as cervical cancer).⁴ The risk factor for having HPV includes multiple sexual partners, a history of STD (Sexually Transmitted Diseases), smoking, and first intercourse at an early age. More than 30% to 40% of all types of HPV are usually transmitted through sexual contact and engaged in anogenital areas.⁵

The HPV virus was important to us because it is significantly associated with cervical cancer (the second most



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common cancer in women), penile cancer in men, and anal cancer in both men and women.⁶ Feeling of shame and stigma associated with STD infections can interfere with a person's desire to shame their sexual partners, close friends, family members, and health care providers.⁷ It increases women's awareness of how HPV virus is transmitted, but show that affected individuals may develop feelings, such as psychological pressure symptoms and overall quality of life.⁸

Given Iran's young population, sexually transmitted diseases are a public health problem in the country. Fighting sexually transmitted diseases is a top priority in both developed and developing countries like Iran. Therefore, it is very important to recognize the need to support and earn the trust of HPV-positive women.⁹ According to Iranian and Islamic cultural contexts, the disease may have different intentions than other societies (because of its sexual nature and the stigma associated with its negative psychosexual effects). There is, just as a positive HPV test result is a challenge for women.¹⁰

The usefulness of paying attention to the health needs of women with HPV is independent of these populations, and the prevalence of HPV in Iran has made timely education, support, and response to their needs difficult. Effective in disease control. of all members of society, especially active people. It is sexually relevant.¹¹

Recognizing that human health needs, including reproductive health needs, are rooted in the cultural context of the each country's social and economic status, HPV people beliefs about important issues such as reproductive and sexual health and believe in spiritual perspective. Services for your reproductive health and support needs. On the one hand, this lack of identification of adequate needs can lead to economic costs in areas that do not need people. It is expected to provide information about HPV in the social context of our country. Therefore, the present study was conducted to identify reproductive health challenges in Iran-positive HPV women.

Material and Methods

This is a qualitative study by content analysis method conducted on 31 HPV-positive women. Criteria for inclusion in this study were women of any marital status, including: single, married, divorced); had no serious illnesses (including cervical cancer) and were willing to share their experiences. Data were collected from her on 21 January 2022 to 19 February 2022 at the women's clinic. The sampling process purposive. These were semi-structured interviews that

Table 1. The Topic Guide.

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- Demographic information.
 - Marital status includes the length of the marriage or relationship with the partner.
 - Semi-structured sample questions:
 - What information do you need and understanding about HPV and cervical cancer?
 - Are there any changes in your daily life with your partner?
 - If you still have a sex life, how do you feel about it? If negatively, why?
 - How does your partner support you?
 - Does your partner know you have the HPV virus?
 - Does your partner accompany you to the doctor?
-

encouraged subjects to answer open-ended questions related to their experiences. Questions are organized around the topic guide (Table 1). Ethical approval was granted by the Research Council and Ethics Committee. Participation in the study was voluntary for women. Prior to timed interviews, researchers explained the purpose of the study and obtained informed written consent to participate in the study, along with permission to record the interview.

A qualitative content analysis method described by Burnard et al,¹² was performed concurrently with data acquisition using MAXQDA 10 software. First, interview transcripts, notes, and field notes were consolidated, and 2 coders reread the transcripts to formulate a common understanding of the overall data. I did open coding. I have combined the extracted code. At a higher level of abstraction, subcategories with related content were interpreted into main categories. The accuracy of this qualitative study is guaranteed based on Guba and Lincoln's 4 parameters. Reliability, reliability, verifiability, and transferability.^{13,14} Reliability standards were achieved through long-term engagement and member audits. During that time, interview transcripts and extracted code were returned to each interviewee and checked for accuracy. The verifiability and reliability of the results were ensured by peer debriefing and external validation. Therefore, 2 observers reviewed and rechecked all transcripts, code, and themes. Ultimately, this process ended with numerous discussions within the research team on areas of disagreement until a final consensus was reached. In order to improve the transferability of the results, we tried to take into account the maximum variance of the sampling. We interviewed women of various ages, relationship statuses,

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Table 2. Demographic Information of the Participants.

No	Age	HPV Genotype	Education	Job	Marital status	Duration of the disease (day)	Smoking
1	26	59	Diploma	Stylist	Married	30	No
2	32	18	Diploma	Stylist	Married	14	No
3	40	11, 16	Diploma	Stylist	Married	1	Yes
4	38	24, 34, 59	Bachelor	Housekeeper	Married	7	yes
5	29	33	Bachelor	Social worker	Married	20	No
6	33	6	Bachelor	Work in the company	Divorced	180	Yes
7	27	6, 18	Diploma	Housekeeper	Married	120	Yes
8	38	11, 18	MSc	employee	Divorced	8	No
9	35	16	Bachelor	Housekeeper	Married	180	Yes
10	32	51	Diploma	Housekeeper	Married	2	No
11	34	16	Bachelor	Housekeeper	Married	20	Yes
12	21	32, 39, 58, 68	Diploma	Nail specialist	Single	300	Yes
13	26	56, 39	Bachelor	Eyelashes	Married	120	Yes
14	21	11, 51	Diploma	Housekeeper	Married	30	Yes
15	31	33, 18	Bachelor	Housekeeper	Married	20	No
16	30	16, 45, 86, 39, 59, 18, 52, 6	MSc	Accountants	Divorced	7	Yes
17	23	45, 31, 59, 51	Diploma	Eyelashes	Single	540	Yes
18	40	16	Diploma	Housekeeper	Married	1440	Yes
19	40	35	Diploma	Housekeeper	Divorced	30	Yes
20	28	18, 1652	Associate Degree	Housekeeper	Married	60	No
21	31	11	PhD	Sales Manager	Married	90	Yes
22	34	45, 31	Bachelor	Employee	Married	7	No
23	24	53, 67	Student	Student	Single	1440	Yes
24	36	81, 11, 35, 51	Diploma	Housekeeper	Married	7	Yes
25	29	68	MSc	Housekeeper	Married	10	No
26	46	39, 56	Bachelor	Housekeeper	Married	45	No
27	35	16, 18	Diploma	Housekeeper	Married	5	Yes
28	36	59, 16	Diploma	Stylist	Married	1080	No
29	26	16, 59	Bachelor	Engineer	Married	180	Yes
30	38	18, 24, 45	Diploma	stylist	Married	1	Yes
31	28	11, 18, 35	Diploma	teacher	Divorced	5	No

education, socioeconomic status, and cultural backgrounds. In qualitative research, generalizability is defined as a complete description of a setting.

Issues elaborated through the lens of participants and external readers. To achieve reliability, the processes within the study were detailed.

Results

Participant characteristics are shown in Table 2.

The results of this study were grouped into 4 themes and 10 main categories. Note that the results regarding reproductive health needs and challenges for her HPV-infected women are in the 4 domains shown in Table 3. The following analysis is organized around these themes:

1. Need for support and counseling to adapt to the disease
2. The need for counseling and education regarding the improvement of the disease

3. The need for a qualified therapist
4. Need for health care services

Need Support and Counseling to Adapt to the Disease

The topic of the need for support and counseling to adapt to the disease includes 3 sub-categories: 1. First Contact; 2. Disclosure Assistance; 3. Patient Issues and Problems.

A women's psychological reaction to a positive HPV test result is complex and varied. HPV- positive women realize that cancer is lurking after diagnosis, and are better able to understand and adapt to the situation. On the other hand, they are challenged by the disruption of their normal lifestyle, the stigma of disease sexuality, and the economic drain of the disease in their relationships with those around them and with their spouses. and can cause illness in those around them or in contact with them. As women say, "*I felt death approaching . . .*" (Participant #6). In this situation, she feels the need for support and counseling to adapt to her own illness and regain her health.

Table 3. Codes, Categories, Them, and Extracted Classes.

Them	Categories	Sub-categories	Code			
Need support and counseling to adapt to the disease	Early reaction	Psychological effect of diagnosis Trying to accept and understand the situation Fear of uterine cancer and the consequences of the disease Quality of life disorder The financial burden of the disease Stigma Disorders in relationships between couples or sexual partners Concerns about transmission changing life style Spiritual strengthening Seek family and community support	<ul style="list-style-type: none"> • The shock of unexpected results • Fear of death • Severe anxiety and worry • Facing confusing and anxious information • Find out how to get the virus • Curiosity and concern about other sexually transmitted diseases • Preoccupation, fear, and worry about the possibility of cervical cancer in the future • Fear of emptying the uterus following cancer • Single girls worried about cervical cancer • More fear of cancer if there is cancer in the individual or family (aunts, uncles, etc.) • Fear of the severity of the disease and its spread throughout the body • Fear and anxiety about the side effects of chemotherapy and hair loss • Fear and worry about the incurability of the disease • The effect of the virus on normal life • Creating obsessive thoughts (obsession with washing) • Restrictions on work due to the possibility of transmitting the virus • Restrictions on establishing relationships with friends and relatives due to fear of transmitting the disease • The high cost of performing abnormal cervical abnormalities • High cost of diagnostic tests • Lack of access to government centers and cheaper • Secrecy and fear of disclosure • Shame and embarrassment caused by the test result • Fear of social isolation • Fear of the judgmental attitude of those around • Receive health care in secret • Doubt/charge/denial and denial of responsibility/separation • Distrust • Blame yourself and your sexual partner • To be accused and to be accused • Concerns about the health of a sexual partner or spouse • Protect yourself and your spouse by restricting relationships to avoid getting new types • Blame yourself for early marriage and its connection to getting sick • Lack of sensitivity and acceptance of men to perform diagnostic tests • Misconceptions about the femininity of this disease • Negative body image as a contagious disease • Fear of asexual transmission to others and family members (pool, bath, clothes, kissing, hugging, toilet, sheets) • Fear of transmission to the spouse or sexual partner • Fear of transmitting the disease to other parts of your body • Lifestyle improvements (exercise, nutrition, sleep, alcohol, and tobacco) • Take supplements and vitamins to strengthen the immune system • Safe sexual behavior • Have regular and routine follow-ups • Prayer, hope and desire for healing • Looking for helpful behaviors • Seek social support and get it • Spouse support • Social support by other patients • Supporting important women in life (mother, sister, friends) 			
			Need counseling and training to improve the disease	Need care information	changing life style Spiritual strengthening Seek family and community support	<ul style="list-style-type: none"> • The shock of unexpected results • Fear of death • Severe anxiety and worry • Facing confusing and anxious information • Find out how to get the virus • Curiosity and concern about other sexually transmitted diseases • Preoccupation, fear, and worry about the possibility of cervical cancer in the future • Fear of emptying the uterus following cancer • Single girls worried about cervical cancer • More fear of cancer if there is cancer in the individual or family (aunts, uncles, etc.) • Fear of the severity of the disease and its spread throughout the body • Fear and anxiety about the side effects of chemotherapy and hair loss • Fear and worry about the incurability of the disease • The effect of the virus on normal life • Creating obsessive thoughts (obsession with washing) • Restrictions on work due to the possibility of transmitting the virus • Restrictions on establishing relationships with friends and relatives due to fear of transmitting the disease • The high cost of performing abnormal cervical abnormalities • High cost of diagnostic tests • Lack of access to government centers and cheaper • Secrecy and fear of disclosure • Shame and embarrassment caused by the test result • Fear of social isolation • Fear of the judgmental attitude of those around • Receive health care in secret • Doubt/charge/denial and denial of responsibility/separation • Distrust • Blame yourself and your sexual partner • To be accused and to be accused • Concerns about the health of a sexual partner or spouse • Protect yourself and your spouse by restricting relationships to avoid getting new types • Blame yourself for early marriage and its connection to getting sick • Lack of sensitivity and acceptance of men to perform diagnostic tests • Misconceptions about the femininity of this disease • Negative body image as a contagious disease • Fear of asexual transmission to others and family members (pool, bath, clothes, kissing, hugging, toilet, sheets) • Fear of transmission to the spouse or sexual partner • Fear of transmitting the disease to other parts of your body • Lifestyle improvements (exercise, nutrition, sleep, alcohol, and tobacco) • Take supplements and vitamins to strengthen the immune system • Safe sexual behavior • Have regular and routine follow-ups • Prayer, hope and desire for healing • Looking for helpful behaviors • Seek social support and get it • Spouse support • Social support by other patients • Supporting important women in life (mother, sister, friends)

(continued)

Table 3. (continued)

Them	Categories	Sub-categories	Code
Requires a qualified therapist	Therapist communication-consulting skills	Therapist talk about HPV	<ul style="list-style-type: none"> • Therapist skills in spreading bad news • Complete and comprehensive information • Introduce sources to receive accurate and valid information • Appropriate physician response to prevent fear in the patient • Appropriate explanation of the virus by the therapist and not to scare the patient from the complications of the virus and its consequences and unrealistic perception (lightness of the disease or exaggeration) • Help the patient to understand the existing situation • Attention and emphasis on the high prevalence of asymptomatic patients • Possess the appropriate information method with the level • Provide advice and solutions • Correction of misconceptions • Strengthen the patient's mood and the use of encouraging words by the doctor • Support and soothe the patient • Empathy and enough time • Patient perception • Proper communication between the therapist and the patient • Patient worries about asking questions of the doctor and physician anger • Patient moral judgment • Identify the source of the virus and the cause • Damage to cohabitation according to the therapist • Intensification of suspicion of the spouse • Tabooing premarital relationships and not talking about it • Costs for the patient • Physicians follow a specific treatment procedure and avoid patient confusion • Reduce patient fatigue and confusion and integrate and cohesive shape • Eliminate and reduce unnecessary referrals • Eliminate and reduce unnecessary tests • -Refer people to the exact laboratory for tests • Keep information confidential • Observance of patient privacy by not visiting several patients at the same time • Keep information confidential • Observance of patient privacy by not visiting several patients at the same time • Information related to other sexually transmitted diseases • Frequently asked questions by patients about content and treatments available in cyberspace and information channels • Need to check the mouth and throat in case of lesions • Need timely information • Requires a reliable source of information • Need to have an appropriate information method with a level of understanding
		Emotional and psychological support of the therapist	
	The therapist's commitment to ethics	Lack of judgment	
		Patient trust and confidence in the therapist	
		Privacy	
	Professional competence and patient information needs	Correct answers to patient-specific questions Information quality	

(continued)

Them	Categories	Sub-categories	Code
		Need to get answers General information about the disease	<ul style="list-style-type: none"> • Need to know about: • The nature of the virus, its types • Duration of the disease • Recurrence of the disease • treatment • Ways of transmitting the virus • How to prevent the virus • How to diagnose the disease in men and women • Symptoms of the disease in men and women • Types of diagnostic tests and how to interpret the results • Vaccine and dose, age of injection, method of injection, and number • Frequent injection • Elimination of misconceptions about the vaccine and its effects (effect of the vaccine on fertility.) • A variety of medical and surgical treatments • Refer the patient to valid and online information sources • Avoid providing false information and beliefs • Sexual health tips • The link between HPV and other gynecological cancers • Effects of smoking (cigarettes and hookah), alcohol, and drugs on the disease • Performing proper tests and sampling and reducing the patient's suffering • Timely referral to qualified specialists • Information about colposcopy (sampling) • Information about conization (wound removal) • Training on flow-up intervals • Lack of painful and annoying examination • Adherence to guidelines and proper follow-up by the therapist • Training on how to manage current sex • Reduce the fear and anxiety caused by having sex • Correcting misconceptions about sex • Decreased libido • PCB • Experiencing pain during sexual intercourse • Sexual boredom • Complete elimination of contact with your spouse to maintain your health • Questions about the need to treat genital warts in men • Concerns about the virus entering the sperm • Fear of female infertility due to virus • Fear of the virus affecting the ovaries and ovarian laziness • Menstrual irregularities • Premature menopause • Fear of infertility due to uterine emptying and virus-induced cancer • Effect of the vaccine on fertility • Fear of the effect of treatments on fertility • Fear of the effect of birth control pills on disease exacerbation • Effect of vaccine on fertility • Fear of the effect of treatments on fertility • Fear of the effect of birth control pills on disease exacerbation
		Clinical skills	
Need for health care services	Consulting to improve couples' relationships	Sexual dysfunction	
	Fear of the threat of fertility	Fear of male fertility disorder Mental involvement and anxiety due to the negative effects of the virus on fertility	
		Reproductive risks due to treatment and prevention	

Table 3. (continued)

Them	Categories	Sub-categories	Code		
Pregnancy related needs		Fear of endangering your health during pregnancy	<ul style="list-style-type: none"> • Fear of disease exacerbation in pregnancy • Fear of weakening the immune system • Postponement of pregnancy due to fear of exacerbation of the disease • Postponement of pregnancy due to treatment of the disease • Impossibility of diagnosing the disease or misdiagnosis of the disease during pregnancy • Fear of premature birth • Failure to have a normal delivery due to disease transmission • Abortion • Negative effects of virus infection on the fetus • Risk of transmitting the virus to the fetus • Fear of fetal abnormalities • Insufficient information about the effect of the virus on pregnancy outcome 		
			Adverse effects on pregnancy	<ul style="list-style-type: none"> • The effect of disease treatment on pregnancy • Effects of the virus on lactation and breast milk • Transmission of the virus through breast milk • Transmission of the virus through infant care • Uncertain future due to disease outcome • Loss of desire to become a mother • Advice to condoms and non-compliance • Fear of the negative effects of OCP on disease exacerbation 	
				Fear of fetal complications	<ul style="list-style-type: none"> • Mandatory screening (Pap smear and HPV test) for early detection • Vaccination of girls and boys • Culture building • Proper education in the community before sexual intercourse about sexually transmitted diseases • Informing the public about the importance of this disease • Educate parents about the importance of this disease
			Breastfeeding guide		
				Threatening the role of wife and mother	
			Contraception		
				Design and Implementation	Prepare a suitable program

Most women did not share their HPV results with their sexual partners for fear of a negative reaction.

Many HPV-positive women say that being diagnosed with HPV means that they will definitely get cancer in the future. Women with higher numbers of genotypes, or those with reported high-risk HPV types, felt more anxiety and fear.

“It says type 3 (CIN3) here, so it’s very malignant, isn’t it? I went and saw him on chemotherapy. I was worried that my hair would fall out, but that was it. I searched the internet for cancer and nothing else.” (Participant #2)

The women asked about the exact location of the virus. With no approved test to detect oral and anal HPV, women who have had oral sex face more stress and anxiety.

“If you have oral sex, that is, sex through saliva, even if you don’t have warts in your mouth, wont warts be contagious? I’m very worried. . .” (Participant #18)

Need Counseling and Training to Improve the Disease

A diagnosis of HPV evokes anger, shame, anxiety, fear, or concern for the social isolation of infected patients. The first question most women with HPV asked was what they could do to take care of themselves and those around them. Therefore, after obtaining a positive test result, seeking information from unofficial and unreliable sources, and discovering that HPV has no cure or that the disease can be ameliorated by strengthening the immune system, HPV Women experience feelings of powerlessness and powerlessness.

HPV-positive women need to improve their unpleasant outcomes by reducing anxiety, worry and by focusing more on their physical and especially mental health. Reduce the chance of All but a few cases of HPV-infected women acknowledged their need for information on how to obtain regular follow-up care. Many women report lifestyle changes such as maintaining perfect hygiene and consuming more fruits and vegetables.

“When I went to the doctor, I didn’t have much information about it. She helped me a lot. Told me, it causes an infected uterus. . .” (Participant #12)

Need a Qualified Health Care Provider

The needs of women with HPV were primarily related to receiving services such as:

The therapist’s high level of expertise and knowledge, appropriate counseling, respect for the patient’s voice, hope for the patient’s recovery, words of encouragement from the therapist, confidentiality.

“The therapist’s lack of dexterity in clarifying test results and exaggerating and exaggerating problems was one of the

participant’s complaints, leading to anxiety and anxiety.” I said, “Eh, eh? What’s wrong?” He said, “It’s dangerous, we have to go and investigate” (Participant #20)

Need Proper Health Care Services

The main needs of HPV-infected are related to their sexual and reproductive life and health care. Participants expressed concern about infertility due to HPV-induced cancer. Some participants feared that factors such as medical and surgical treatments such as cryotherapy, lasers, and conization could affect fertility and cause complications.

Fear and anxiety caused by the virus in male and female infertility were expressed by the participants. Concerns have been raised about the virus’s entry into semen and its effect on ovarian health.

“I often think about these things. How is my pregnancy? Will I get pregnant? Can the baby be harmed? Or is there a problem in the prenatal period? Can it be prevented or not? I’m very nervous. Can this happen or not? What will happen to the baby? My mind is so busy. What about my delivery?” (Participant #13)

Because the immune system is weakened during pregnancy, women with HPV have expressed fear that the disease will worsen during pregnancy. Some women delay vaccination for fear of misdiagnosis during pregnancy or complications from treatment or vaccination. Women planning a pregnancy should also learn about the effects of pregnancy on the HPV virus, how to deal with the HPV virus during pregnancy, abnormal cell changes, miscarriages, premature births, viral side effects and abnormalities in the fetus and baby. We need to be well informed about unwanted pregnancy outcomes. Were there embryonic, breastfeeding, and birth types?

“Because I’m planning to get pregnant. I’m afraid it’s going to affect HPV. I’m afraid it’s hard to get pregnant.” (Participant #15)

Sufficient information is lacking on the effects of viruses on the reproductive system, such as female hormones and premature menopause.

Similar to condom recommendations and the adverse effects of hormonal contraceptives on abnormal cellular changes, some of these individuals report not requiring contraception because of their condition, so contraception requires special consideration. Most of the wives complained that their husbands did not use condoms and had difficulties and problems.

“Honestly, my husband doesn’t like to use condoms. I try to avoid inside sex 80-90% of the time,” she said. (Participant ##26)

“I was totally exhausted from sex. I’m afraid it will get worse...” (Participant #28)

Table 4. Information Needs of Women with HPV.

How the disease is transmitted to a sexual partner and others
How to prevent a virus
How to get the virus
Disease management and treatment
Prevalence of regression and recurrence of the disease, the impact of the virus on sexual intercourse and sexual partner
Impact of the virus on fertility and cancer risk

Some single girls are worried and challenged because they think they can no longer marry because they will pass the disease on to her husband through sex.

Discussion

In this study, women's views on HPV, reproductive health needs and challenges were identified based on 4 themes. According to the results of this study, most HPV women did not have the necessary knowledge about the HPV virus, its causes, symptoms, complications, prevention, and screening methods. There was no serious need for Caregivers underperform in this regard because they pose a threat to their livelihoods. The results of this study are consistent with the work of McCaffery.¹⁵

Common reactions after a diagnosis include shock, fear, anxiety, and stress. This response was primarily related to the type of intercourse, lack of precise knowledge, and fear of cancers associated with the disease. Because more information about HPV may reduce the intensity of these feelings.¹⁶ Information alone may be insufficient to achieve optimal patient care. Health care providers can be important in treating the emotional elements associated with the diagnosis as well as the disease itself.

Because HPV information is often associated with other sexually transmitted infections, the lack of adequate information for patients and their experience searching the Internet for more information about HPV have been reported as concerns. As with another study, the Internet was the primary source of information for searching these women.¹⁷

In the absence of a formal and integrated HPV information program, it is necessary to review the information provided to women with HPV in order to provide them with accurate and accurate information on many important issues (Table 4).

Results indicated that provider communication strategies, such as content, were among the critical needs of these patients. They also reported that HPV-infected women were referred to multiple physicians, and physicians should adopt a multidisciplinary approach so that patients are not confused by being referred to another physician. Care must be taken in how to provide the necessary information to the patient. This study presents HPV results and information and shows that clear communication when using counseling strategies can help these women better understand their health status.^{18,19}

Women had many questions about the relationship between HPV infection and cervical cancer. As with other studies, especially others, there is confusion about the source of infection, treatment, and reinfection.^{17,20} When asked about related questions such as throat and rectal cancer and partner anxiety, women see HPV as more than just a cause of cervical cancer. Therefore, to reassure these women and meet the needs of these individuals, health care providers should consider appropriate counseling strategies.

HPV-positive women did not have accurate information about how to prevent or clear the virus from cervical cancer, but another challenge after testing positive was finding a cure. Therefore, they made lifestyle changes to boost their immune system. However, many participants needed accurate information about vaccine efficacy and side effects. As there is currently no treatment available for HPV, recommendations for the management of HPV-positive patients often refer to conservative management. WHO says cervical cancer is largely preventable,²¹ as noted in previous studies, cancer screening can serve as a valuable opportunity to promote a healthy lifestyle.^{22,23}

One of the needs of infected women is to obtain information on the effects of pregnancy on the HPV virus. Lack of sufficient information in this regard and fear of exacerbation or misdiagnosis of the disease has led to a low desire to conceive, and HPV-infected women are advised what to do for a healthy pregnancy or how to manage it. I needed to know treat the disease during pregnancy.^{24,25}

Infection with the HPV virus is significantly associated with many changes in reproductive function.²⁶ This study showed that HPV-infected women have educational and reproductive needs, including. The extent to which the virus affects sperm or egg cells and reduces fertility. In previous studies, scientific evidence supports the presence of her HPV in semen and its proposed role in reducing fertility.²⁷

Consistent with our study, several other studies have shown that HPV-positive women need information about female infertility and the impact of HPV on fertility and pregnancy outcomes. I'm here.^{21,28} HPV Women appear to have needs in this area, and health care providers are encouraged to take these needs seriously and provide appropriate responses.

HPV-positive women say the main reason they do not conceive is fear of the health consequences of pregnancy. They said it is difficult to diagnose the disease during pregnancy, leading to delayed diagnosis, lost time and disease

progression. of women said they changed future pregnancy plans because of a positive HPV test result.²⁹

Consistent with our results, 2 studies also demonstrated a need for an association between HPV infection and adverse pregnancy outcomes such as spontaneous abortion and pre-term birth.^{30,31} Pourmohsen et al in their research found that one of the most common fears of women with HPV, especially in couples, is passing the virus from mother to fetus during pregnancy, childbirth, and breastfeeding.³²

Women interviewed noted that births with NVD may pose a risk of transmission to the baby, which may be eliminated by cesarean section, and information on how to breastfeed and how to breastfeed is also needed. When the baby was born, I felt like I was scouted for baby care because some birth witnesses reported being so confused. Although there is still controversy about the adverse effects of HPV on pregnancy outcomes, Women need good information and health care providers need to meet this need. Sahin et al survey showed that her overall frequency of HPV infection from mother to infant was 39.7% of her, and the rate of infection to infants was significantly higher during vaginal delivery compared to cesarean delivery it was done.³³

Some women mentioned their history of OCP use and said they were advised to stop using it to be aware of the negative effects OCP use could have on them. Therefore, it should be noted that long-term use of OCP increases the risk of cervical cancer. It may also increase the chance of infection.¹⁵

The most common response of HPV-infected women to diagnosis was not to have sex. This was because sexual contact was thought to exacerbate the disease and spread it throughout the body. Several quantitative and qualitative studies have reported abnormalities in the sexual life of HPV-positive women.^{34,35}

Lack of knowledge and information about the HPV virus and misconceptions about how the disease is transmitted are major problems affecting libido, especially in women with genital warts on their bodies. Some reported not wanting to have sex with their husbands while these warts were on their bodies. May be related to cervical cytology results. After being diagnosed with HPV, its sexual nature can create anxiety and suspicion in couples and affect sexual relationships. Therefore, more attention should be paid to the treatment of HPV-infected women and HPV treatment by health care providers and physicians. One study that was inconsistent with our findings reported that HPV-infected women had no difference in their sex life before and after diagnosis.³⁶

Although premarital sex is unacceptable in our society, some single women in our study had sex. This is one of the strengths of our study. One of her limitations of this study is that because of the small number of women, they were enrolled in the study at any time from the time of diagnosis, but during the illness Women's needs may vary. This study did not reflect a man's sexual experiences and attitudes after his wife was diagnosed with her HPV. Interviewing spouses and researching their experiences can be helpful.

Conclusion

According to the results of this study, women with HPV face many challenges and are looking for information on how to deal with them. Therefore, primary and professional-level health care providers must be aware of the needs of these patients so that they can provide appropriate advice in a manner that meets their needs. Topics of interest to these patients:

- ♣ How to get this virus, prevention, transmission, . . .
- ♣ Effects on fertility and sexuality, pregnancy and lactation. . .
- ♣ Advice on immunizations, follow-up intervals and boosting immunity.
- ♣ Healthcare provider expectations of her HPV-positive woman, including confidentiality, communication and counseling skills, and an interdisciplinary approach.

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Author Contributions

Mina Galeshi: administration, investigation, interpretation and Writing—review and editing; Zahra Motaghi: conceptualization, methodology, supervision and Writing—review and editing; Shahla Yazdani, Hoda shirafkan: investigation and Writing—review and editing; Mina Galeshi, Hoda shirafkan: methodology, interpretation and Writing—review and editing; Mina Galeshi and Zahra Motaghi: data curation, formal analysis, interpretation, Writing—original draft preparation. All authors approved the final version of the manuscript

Availability of Data and Materials

All relevant data are within the paper however, any question or other file data is required you can contact us using the email address, upon reasonable request.

Competing Interests

The authors have declared that no competing interests exist. All relevant data are within the paper and its Supporting Information file. However, any question or other file data is required you can contact us using the email address “galeshi_m@yahoo.com”, upon reasonable request.

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Written informed consent was obtained from all the participants. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and national research committee and with the 1964 Helsinki declaration and its later amendments. It was approved by the ethics committee of Ethics Committee of Shahrood University of Medical Sciences (IR.SHE.REC.1400.154).

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