

## ORIGINAL ARTICLE

# Vulnerable Women's Self-Care Needs in Knowledge, Attitude and Practice Concerning Sexually Transmitted Diseases

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### ABSTRACT

**Background:** Vulnerable women are prone to sexually transmitted diseases (STD) due to their special conditions and poor knowledge about these diseases in the society. Therefore, the present study aimed to determine the vulnerable women's self-care needs in knowledge, attitude and practice concerning STD.

**Methods:** This is a cross-sectional-descriptive study conducted in 2014. The data collection was carried out using a self-administered structured questionnaire. 120 vulnerable women referring to centers affiliated to health and well-being center in Isfahan participated in this study. They were selected through proportional rationing sampling and filled out a researcher developed questionnaire containing information on personal characteristics, self-care knowledge, attitude, and practice needs toward the STD. The data were analyzed using statistical methods including Spearman & Pearson correlation co-efficient, independent t-test and ANOVA. All analyses were carried out using SPSS, 20.

**Results:** Based on the results, most of the subjects mentioned that their priorities of self-care needs in domains of knowledge, attitude and practice were "familiarization with the types and contamination ways of sexually transmitted diseases" (57.9%); "diagnosis of STD only makes us anxious" (24.8), and "the method of washing the genital area before and after intercourse" (41.3%), respectively. There was a significant association among marital status, education, history of addiction, and self-care needs in domains of knowledge, attitude and practice ( $P < 0.05$ ).

**Conclusion:** Results showed that vulnerable women not only knew their need about STD, but also paid attention to their attitude and practice needs toward STD. Therefore, educational programs should be designed and administrated by the experts, based on vulnerable women's self-care needs concerning their knowledge, attitude and practice to prevent and control STD in vulnerable individuals.

**KEYWORDS:** Attitude; Knowledge; Practice; Self-care; Sexually transmitted diseases; Vulnerable population

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## INTRODUCTION

STDs are transmitted from someone to another through sexual activities and close touch (vaginal, rectal and oral).<sup>1</sup> Among the most common STDs are Chlamydia, Gonorrhea, Trachoma, Herpes, Syphilis and HIV.<sup>2</sup> American Diseases Prevention and Control Center (2010) reported prevalence of Chlamydia, gonorrhea, syphilis (0%with no change) and congenital syphilis as 8%, 4% and 7%, respectively. This center estimated that about 20 million new cases of such diseases occur annually in USA, among which 50% occur in individuals aged 15-24 years. The highest prevalence of STD was observed in age group 20-24 years (38%).<sup>3</sup> In Iran, the incidence of STD increased by 8 folds from 1999 till 2006, and on the average, the number of the patients with STD increased by 17% in 2008.<sup>4</sup> These diseases are one of the most important causes of maternal death at their fertility age. These diseases not only lead to risky complications such as infections, abortion and early delivery, but also result in long term complications in maternal health including infertility, cervix cancer, pelvic chronic inflammatory diseases, ectopic pregnancy and inappropriate outcomes of pregnancy, and also an increase in the risk of acquired immune deficiency syndrome (AIDS) transmission.<sup>5,6</sup> Among the risk factors in transmission of STD, biological, behavioral and social factors can be pointed out. Research showed that vulnerable women are one of the major groups, predisposed to the risk and transmission of STD. They include addicted women living with an addicted spouse, history of prisoning among the spouses, and the women with either several sexual partners or with sexual relations out of the family frames as well as the sexually hyperactive women or those with several sexual partners.<sup>7</sup> Vulnerable women are categorized into sexually high risk behaviors groups who can be drug abusers. They are from the most underprivileged groups from emotional and psychological support and many of them are prone to daily violence, contempt, stigma and various physical, psychological,

verbal discriminations either by their families, or those with whom they are in touch as well as the society. They are mostly from lower classes of the society, have low education and have been raped or forced to have intercourse with no condom, violence or use a shared contaminated syringe.<sup>8</sup> Kolahi et al. (2012) in Tehran showed that 82% of the vulnerable women may accept their sexual partners' suggestions in any circumstances. Specifications such as education and low awareness, addiction, living in a deprived area, family disintegration, feeling of disability and no support are among the factors forcing them to accept all of their sexual partners' requests. This issue is more observed among the older subjects.<sup>9</sup> Vulnerable women are more predisposed to high risk behaviors due to their special condition, which can lead to contamination of the diseases in the society and irreparable complications.<sup>10</sup> The results of Gelberg et al.'s study (2008) showed that women with a sexual partner compared with multiple sex partners used fewer condoms.<sup>11</sup> In studies in Iran, the use of condoms is different among high-risk groups. In the study of Ye (2007), the prevalence of using condom, among vulnerable women under 25 years (59%) and older (52%), respectively was researched.<sup>12,13</sup> In another study, the results of Ataei et al. (2011) showed that among the prisoned women, the most common high risk behaviors include history of prostitution, temporary marriage, addiction through injection, consumption of alcohol, narcotic materials, cigarette and hookah.<sup>14</sup> This population is prone to infections of HBV, HCV & HIV.<sup>15</sup> The vulnerable women from the group mostly deprived from emotional and psychological support are mostly from lower classes of the society with low education.<sup>16</sup> The study of Eatemad et al. (2010) with the aim of determination of the knowledge and attitudes towards AIDS in groups with high-risk injections and sexual behavior showed that the majority of respondents had a negative attitude towards AIDS. This problem indicates discrimination against AIDS patients and is due to poor awareness of AIDS.<sup>16</sup> The study of Mohme (2008) with the aim of sexually

transmitted diseases in Iran showed that women with high-risk behaviors due to poor health behaviors are prone to sexually transmitted diseases. Lack of proper training provided for these women leads to an increased prevalence of sexually transmitted diseases in the community as a serious threat to people's health.<sup>4</sup> The study of Logie et al. (2014) with the aim of the history of sexually transmitted diseases among lesbians in Toronto showed that women with sexual deviations (Homosexual) are prone to sexually transmitted diseases due to lack of awareness about sanitation during sexual relations. Logie emphasized the need to develop appropriate and effective strategies to prevent the disease in accordance with the needs of the women.<sup>17</sup> Due to their special circumstances, incurability of the diseases and lack of vaccines for some sexually transmitted diseases such as HIV/AIDS, the only way to deal with these diseases is prevention of infection through health education to the community, especially vulnerable women. The first step in Health Education is the awareness of the community for behavior change.<sup>18</sup> Since the purpose of behavior change is modification of maladaptive and destructive behaviors and behavior change formation.<sup>19</sup> The correct application and effective interventions should be based on vulnerable women's needs, level of previous learning experiences, lifestyles and attitudes among the patients.<sup>20</sup> The goal is ultimately giving information to them to practice self-care.<sup>21,22</sup> Therefore, this study aimed to determine the vulnerable women's self-care needs in domains of knowledge, attitude and practice with regard to STD and their association with some personal characteristics and high risk behaviors.

## **MATERIALS AND METHODS**

This is a cross-sectional-descriptive study, conducted on the women referring to vulnerable women's counseling centers, affiliated to the health and well-being organization in Isfahan, Iran. This study was done in 2014 and 120 subjects were selected by rationing sampling

from 4 centers, 30 person randomly from each center. Inclusion criteria were addicted woman, woman under treatment with methadone, prostitutes, and the homeless ones. Exclusion criteria included absence in more than 2 sessions of classes, unwillingness to continue research, imprisonment, no psychotropic drugs consumption, being interested to participate in the study, age group 18-47 years, and education level of at least primary school. Data were collected through questioning and also a researcher-made questionnaire including information on personal characteristics (age, education, occupation and marital status) and high risk behavior (history of prostitution and addiction) and self-care needs questionnaire in domains of knowledge (8 items), attitude (8 items) and practice (5 items) concerning STD diseases. The items were scores between 1-8 points in self-care needs (in domains of knowledge and attitude). Score 1 showed the first priority and score 8 showed the last priority. In section of self-care needs in the domain of practice, each item had priorities of 1-5 (1 showed the first and 5 the last priority). To make the content of the questionnaire, firstly the researcher attended these centers for 8 consecutive weeks to get familiar with the research environment of vulnerable women, and then review the references, texts, articles and consult with the experts in this context. Content validity of the questionnaire was established by 43 experts (social doctor, medical education, social worker, nurse and midwife). The questionnaire was distributed among 20 vulnerable women to confirm the reliability; its reliability in section of self-care needs in the domain of knowledge, attitude and practice was confirmed by Cronbach alpha of 0.79, 0.87 and 0.89, respectively. Researcher referred to vulnerable women's counseling centers and well-being organization supportive centers after obtaining a written consent from vice chancellery for research in Isfahan University of Medical Sciences, ethics committee and vice chancellery for health and Isfahan well-being organization. She explained the research goals, obtained the written consent from the subjects

and conducted rationing sampling.

The sample size was calculated as at least 96 through  $n=z^2 \cdot s^2/d^2$  formula ( $Z$ =confidence index 95% (1.96),  $S$ =estimation of need score SD in domains of health deviation &  $D$ =accuracy rate (0.2 S).

120 subjects, meeting inclusion criteria, were selected to complete the questionnaires, and the questionnaires were filled out in a private place. After the data were collected, they were analyzed using SPSS 20. In this phase of the study, main descriptive statistics including mean, standard deviation (SD), and Spearman & Pearson correlation coefficient, independent t-test and ANOVA analysis were used.  $P$  value  $< 0.05$  was considered as significant.

#### *Ethical Considerations*

Prior to the study, the approval of the Research Ethics Committee (393677) of Isfahan University of Medical Sciences and the relevant authorities were obtained, and necessary arrangements were made. Objectives of the study, test methods,

confidentiality of the personal information, and voluntary participation in the study were explained to the study subjects and their written consents were obtained.

#### **RESULTS**

The subjects were aged  $33.27 \pm 7.23$  years. Most of them (40.5%) had a primary education, 85.1% were housewives, 49.6% were married, 60.3% have the history of practicing prostitution and 74.4% of them have the History of addiction (Table 1).

With regard to the subjects' self-care needs, the results showed that most of the subjects selected "familiarization with the type and the ways of STD contamination" with (57.9%) in domain of knowledge as their first priority. Furthermore, the results showed that subjects of "Familiarization with types of infections and the ways of their transmission through men's genital system" (55.4%), "Familiarization with structure of men's genital system (internal and external)" with 54.5%, "After rape interventions concerning

**Table 1:** Characteristics of the vulnerable women

Variables		Number	Percentage
Age	18-23	11	10.1
	24-29	27	22.3
	30-35	34	28.1
	36-41	35	28.9
	42-49	13	10.7
Education Level	Primary	49	40.9
	Junior high school	33	27.5
	Secondary school	34	28.3
	Collegiate	4	3.3
Marital Status	Married	59	49.2
	Temporary Marriage	23	19.2
	Divorced	31	25.8
	Widowed	7	5.8
Occupation Status	Employee	1	0.8
	Self-employment	16	13.3
	Homemakers	103	85.8
History of addiction	Yes	89	74.2
	No	31	25.8
History of prostitution	Yes	72	60
	No	48	40

venereal diseases” (47.9%), “Familiarization with the structure of women’s genital system and function (internal and external)” (45.5%), “Sexual behavior (healthy and risky)” (44.6%), “Familiarization with diagnosis of venereal diseases (signs, physical examination and laboratory tests)” (31.4%) and “Familiarization with care and treatment of venereal diseases” (30.6%) were ranked as the subjects’ priorities and educational needs respectively in the domain of knowledge with regard to STD (Table 2).

With regard to self-care needs, the results showed that most of the subjects selected “diagnosis of venereal infection only brings about anxiety” with (24.8%) as their first priority in the domain of attitude. Furthermore, the results showed that the subjects “In the case of men’s or women’s involvement in infection, it should be honestly told to the sexual partner” with 24%, “Use of condom is unpleasant for the women when infection exists” with 15.7%, “As venereal diseases are shameful, I do not refer to health centers” with 14.9%, “Physical examination and sampling from women’s secretions cause suffering for the women” with 14.9%,” Timely treatment of venereal infections brings about

health for one, his/her spouse or his/her sexual partner” with 12.4%, “Type, number, and length of sexual relations have no effect on venereal infection transmission” with 11.6% and “Prevention of venereal diseases is more important than treatment” with 0.8% were ranked as the subject priorities and educational needs respectively in the domain of attitude with regard to STD (Table 3).

With regard to self-care needs, the results showed that most of the subjects selected “methods of rinsing the genital area during urination and defecation, and before and after intercourse” with (41.3%) as their first priority in the domain of practice. Furthermore, the results showed that the subjects “Referring to health centers for women’s periodical physical examinations” with 34.7%,”Genital system hygiene during intercourse, menstruation and in travel” with 28.9%, “Conditions of having a sexual relationship during menstruation, involvement in venereal diseases, treatment and pregnancy” with 27.3% and “Necessary interventions in the case of probable venereal diseases infection of the sexual partner” with 26.4% were ranked as the subject priorities and educational needs respectively in the domain of practice with regard to STD (Table 4).

**Table 2:** Frequency distribution of priorities of self-care needs in the domain of knowledge toward STD

Variables	Priority score							
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	6 (%)	7 (%)	8 (%)
Familiarization with types and ways of venereal diseases transmission	57.9	9.9	5.8	5.8	8.3	3.3	4.1	5
Familiarization with types of infections and the ways of their transmission through men’s genital system	55.4	12.4	5.8	5.8	8.3	1.7	3.3	7.4
Familiarization with structure of men’s genital system ( internal and external)	54.5	10.7	5.8	5.8	10.7	4.1	5.8	2.5
After rape interventions concerning venereal diseases	47.9	18.2	10.7	6.6	5.8	6.6	1.7	2.5
Familiarization with structure of women’s genital system and function( internal and external)	45.5	10.7	5	6.6	14	5	6.6	6.6
Sexual behavior (healthy and risky)	44.6	11.6	8.3	3.3	12.4	2.5	6.6	10.7
Familiarization with diagnosis of venereal diseases( signs, physical examination and laboratory tests)	31.4	20.7	11.6	9.1	12.4	5	7.4	2.5
Familiarization with care and treatment of venereal diseases	30.6	19	20.7	7.4	7.4	2.5	5	7.4

**Table 3:** Frequency distribution of priorities of self-care needs in domain of attitude toward STD

Variables	Priority score							
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	6 (%)	7 (%)	8 (%)
Diagnosis of venereal infections only brings about anxiety	24.8	22.3	6.6	9.1	5.8	6.6	13.2	10.7
In case of men's or women's involvement in infection, it should be honestly told to the sexual partner	24	22.3	9.1	3.3	9.9	6.6	9.9	14
Use of condom is unpleasant for the women when infection exists	15.7	7.4	6.6	2.5	4.1	6.6	7.4	48.8
As venereal diseases are shameful , I do not refer to health centers	14.9	5.8	3.3	5	8.3	5	9.1	48.8
Physical examination and sampling from women's secretions suffer the women	14.9	2.5	2.5	5	9.9	6.6	14	44.6
Timely treatment of venereal infections brings about health for the one , his/her spouse or his/her sexual partner	12.4	8.3	4.1	3.3	4.1	3.3	8.3	56.2
Type , number , and length of sexual relation has no effect on venereal infection transmission	11.6	14	13.2	7.4	10.7	6.6	9.1	12.4
Prevention of venereal diseases is more important than treatment	0.8	2.5	2.5	5	9.9	5.8	9.9	62.8

**Table 4:** Frequency distribution of priorities of self-care needs in the functional domain toward STD

Variables	Priority score				
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
Methods of rinsing the genital area during urination and defecation, before and after intercourse	41.3	19.8	20.7	9.1	7.4
Referring to health centers for women's periodical physical examinations	34.7	30.6	13.2	7.4	13.2
Genital system hygiene during intercourse, menstruation and in travel	28.9	24.8	24.8	10.7	9.9
Conditions of having a sexual relationship during menstruation, involvement in venereal diseases , treatment and pregnancy	27.3	11.6	13.2	4.1	43
Necessary interventions in case of probable venereal diseases infection of the sexual partner	26.4	24	16.5	13.2	19

The results of Spearman correlation test showed that there was a direct correlation between the self-care needs in the domain of knowledge and education level ( $P < 0.001$ ,  $r = 0.4$ ). The results of analysis of variance (ANOVA) showed that there was a direct correlation between the self-care needs in the domain of knowledge and marital status ( $P = 0.005$ ). The results of independent t-test showed a significant difference between the self-care needs in the domain of knowledge and history of addiction ( $P = 0.005$ ) and prostitution ( $P < 0.001$ ). But, the results of Pearson correlation test showed that there

was no significant association between these needs and age ( $P = 0.26$ ,  $r = 0.1$ ). The results of ANOVA revealed no significant association between these needs and occupation ( $P = 0.62$ ).

The results of Spearman correlation test showed that there was a direct correlation between the self-care needs in the domain of attitude and education level ( $P < 0.001$ ,  $r = 0.3$ ). The results of ANOVA showed that there was a direct correlation between the self-care needs in the domain of attitude and marital status ( $P = 0.003$ ). The results of independent t-test showed a significant difference between the self-care needs in the domain of attitude and

history of addiction ( $P < 0.001$ ). But, the results of Pearson correlation test showed that there was no significant association between these needs and age ( $P = 0.23$ ,  $r = 0.11$ ). The results of ANOVA did not show a significant association between these needs and occupation ( $P = 0.27$ ). Moreover, independent t-test showed no significant difference between these needs and prostitution ( $P = 0.26$ ).

The results of Spearman correlation test showed that there was a direct correlation between the self-care needs in the domain of practice and education level ( $P < 0.001$ ,  $r = 0.3$ ). Also, the results of ANOVA showed that there was a direct correlation between the self-care needs in the domain of practice and marital status ( $P < 0.001$ ). A significant difference was observed between the self-care needs in the domain of practice and history of addiction ( $P = 0.005$ ) and prostitution ( $P = 0.003$ ). However, the results of Pearson correlation test showed that there was no significant association between these needs and age ( $P = 0.63$ ,  $r = 0.07$ ). ANOVA showed no significant association between these needs and occupation ( $P = 0.59$ ).

## DISCUSSION

The present study highlighted the importance of detection of these women's self-care needs. The results showed that women selected "familiarization with the types and the ways of STD contamination" as their first priority in the domain of knowledge. In a study, Rahimi Movaghar (2011) reported that addicted women, especially those with drug injection, lived in poor health conditions and were deprived from necessary education on AIDS, hepatitis transmission and these diseases prevention methods that increased their risk of STD.<sup>23</sup> They pointed out the lack of necessary knowledge as an obstacle for the prostitutes to use health services and have a safe sexual relationship that shows their educational needs in this domain;<sup>24</sup> this is consistent with the results of the present study.

Our results showed that women selected

"diagnosis of venereal infection only brings about anxiety" as their first priority and concern about these diseases. The results<sup>25,26</sup> showed that the most important causes to avoid Pap smear test were lack of knowledge, believing in no risk of cancer, any current problem, fear of being afflicted with cancer, shyness and fear of its painful procedure. Frank et al., in their study in Kenya, reported feeling of shyness and fear as one of the barriers in health care follow ups concerning genital system infection.<sup>27</sup> Therefore, with regard to the obtained results of the present study as well as those of the other studies, there should be a safe atmosphere in health care centers of vulnerable women to eliminate their fear of stigma of STD and high risk sexual behaviors, causing their negative attitude and resulting in their fewer referrals.

In addition, the results showed that "the method of rinsing the genital area after urination and defecation and before and after intercourse" was selected as the most important educational needs in the domain of practice. Findings of studies showed that women with high risk behaviors are prone to be contaminated with STD due to their poor health behavior.<sup>4</sup> It has been reported that women with sexual corruption (lesbians) are prone to STD due to lack of knowledge about health principles during their sexual relationship. They emphasized the need for designing appropriate and efficient strategies to prevent these diseases based on their needs.<sup>18</sup> The results showed that among majority of women, there were moderate knowledge and attitude about sexual health, sexually transmitted diseases, AIDS and family planning.<sup>28</sup> Research showed that these women are prone to STD due to their poor knowledge, attitude and practice in genital system hygiene.

The present study showed a significant association between the subjects' marital status, education and history of addiction, and their self-care needs in three domains of knowledge, attitude and practice. A study conducted on vulnerable and high risk women

in Tehran province reported that the majority of women had the history of prostitution and addiction, education level of Junior high school and divorce.<sup>9</sup> The results showed that the women prone to AID reported that the majority of women had married and then were divorced, and had an education level of primary school and middle school (and were mostly poor and homeless. Their findings showed that the participants' experiences were in relation with environmental and social barriers in the use of condom in four concepts of poor support, poverty and economic factors, socio-cultural values and drug abuse.<sup>29</sup>

Also, our results showed a significant association between addiction and self-care needs in domains of knowledge and practice. As shown, high risk sexual behavior is considered to be a process by which knowledge, attitudes, values, beliefs, and social norms about sexuality are acquired. The study of adolescent risk behavior has been motivated by public health concerns such as the prevention of pregnancy and sexually transmitted infections (STDs).<sup>30</sup> In an analytical-descriptive study on individuals, aged 40 or older with coronary artery disease, it was shown that factors including sex, age, occupation, education and income level didn't have a significant relationship with self-care ability.<sup>31</sup>

Finally, it should be noted that the subjects were more prone to contamination and transmission of STD to other individuals in the society due to their special conditions. Therefore, the researcher paved the way toward planning and reducing such diseases in the society through extraction of women's self-care needs concerning STD. Vulnerable women's limitation and fear concerning expression of their problems clearly, their inconvenient availability and inadequate participation were among the limitations of the present study.

## CONCLUSION

Vulnerable women feel they need education on

STD. Their most important needs in the domain of knowledge, attitude change and modification of practice are the ways and methods of STD transmission, modification of their attitude about diagnosis of venereal infection and the health care of genital system hygiene before and after intercourse. Based on the results obtained, more efficient and larger interventions to prevent STD through better education of women's self-care needs are recommended.

Therefore, ongoing education of women about STD and their outcomes by associated experts in this context based on their self-care needs can be an efficient step.

**Conflict of Interest:** None declared.

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