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Effects of sociodemographic sexual and clinical factors and disease awareness on psychosexual dysfunction of refugee patients with anogenital warts in Turkey: a cross-sectional study.

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Abstract

Objectives: Effects of sociodemographic, sexual and clinical factors, and disease awareness on psychosexual impacts of anogenital warts (AGWs), in certain societies are less known. The study aimed to determine psychosexual effects of such factors in refugees with AGW.
Methods: A pilot, cross-sectional study on 100 refugees with AGWs was conducted based on determining depression (DEP) and sexual experiences (S-Exp) of the subjects. Effects of sociodemographics, sexual life properties, clinical and laboratory examination findings, disease duration, relapse, and disease awareness on psychological status of the subjects were determined. They were examined by a dermatologist, a family physician and a psychiatrist, respectively and were questioned by Beck Depression Inventory (BDI) and Arizona Sexual Experience Scale (ASEX). Results were analysed by NCSS (Number Cruncher Statistical System) software program, 2007. A p value <0.05 was accepted significant.
Results: In terms of DEP and S-Exp, there were no significant differences between the BDI and ASEX values of the subjects below and above their thresholds according to the predetermined variables (each p>0.05), except for treatment modalities in which the rate of DEP in subjects who received cryotherapy (CT)+trichloroacetic acid (TCA) was higher than those who solely received CT treatment (p<0.003). Ninety-three percentages of the subjects had inadequate disease knowledge or misperceptions.
Conclusion: Psychosexual adversities of AGWs on DEP and S-Exp can be determined significantly lower in refugees because the reasons of inadequate or wrong disease knowledge such as ignorance / misperceptions/superstitions, and/or, indifference to their diseases, because radical changes in understanding of quality of life (QoL), which are stemmed from harsh living conditions.

Keywords: Anogenital warts; Life course epidemiology; Psychosocial factors; Psychology; Sexual health

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Introduction

Chronic and disfiguring skin diseases may lead to negative impacts on persons' psychology and their quality of life (QoL), thus they may feel stigmatized, anxious or depressed [1,2]. Significant psychiatric and psychological morbidities are present in at least 30% of dermatological patients, in which depression (DEP) is one of the most common disorders [3]. These effects are especially prevalent when skin disease affects important body-image areas [4]. On the other hand, DEP is associated with decreasing levels of sexual desire and arousal, orgasm difficulties, reduced sexual satisfaction and sexual pain [5]. However, psychological effects of STD on dermatological disorders are rather new subject. Among the outcomes of STD, many psychological and life style changes, which can lead a negative impact on self-esteem, interpersonal relationships and QoL, have been suggested [6].

Anogenital Human papilloma virus (HPV) infection is the most common STD [5] and AGW is the most frequent clinical presentation of it [7]. HPV is usually transmitted via direct skin to mucosal contact, predominately through vaginal and anal sexual intercourse [8]. It has been proven that 90% of AGWs are caused by types 6 and 11 of HPV, which do not have carcinogenic potency [9]. The exact prevalence of AGWs is unknown [10]. In the United States (US), an estimated 79 million persons are infected, and an approximately 14 million new HPV infections occur every year among persons between the ages of 15 and 59 [11].

HPV infection has become one of the most discussed topics in current medicine. However, psychological consequences of AGWs, and effects of possible risk-factors on these impacts are often overlooked [12]. Lack of literature on this topic in certain societies encouraged us to conduct this study.

Material and Methods

Study design and subjects

A pilot, cross-sectional study was performed at dermatology, family medicine and psychiatry clinics of Health Science University, Bagcilar Research and Training Hospital, between September 2012 and April 2014. Following the approval of Local Ethics Committee, randomly selected 100 refugees who admitted to our dermatology clinic of both sexes between the ages of 18 and 54 with AGWs were enrolled in the study. After the aim of study was explained to subjects and written informed consent was obtained from each one, they were evaluated by a dermatologist and family physician, and a psychiatrist respectively.

Exclusion criteria

Patients with any comorbid psychiatric and dermatological disorders other than STDs, or medical conditions including endocrinal, muscular, neurological, or cardiovascular diseases, renal dysfunction, hypogonadism, smoking, use of any medication including corticosteroids that could affect sexual functioning, existence of any sexual problems before the manifestation of the dermatological disorder, patients who had any known immunological diseases or undergoing immune suppressive therapy, and patients who did not give consent were excluded from study.

Data collection

Each stage of the study was performed through sworn translators who know the native language of the subjects. All AGWs were diagnosed clinically in dermatology clinic. On the dermatological examinations, locations of the lesions (corpus penis, perianal area, pubis, perineum, vulva and mixed) and presence of any dermatological lesion of comorbid STDs (e.g AIDS, candidiasis (C), molluscum contagiosum (MC), tinea cruris (TC) were recorded. Involvement of more than one area was accepted as mixed. Subjects with perianal condyloma were also examined by anoscopy, and women with vulval condyloma by vaginal application of 2% acetic acide solution and cervical smear. They were also tested to see whether they were carriers of other possible STDs such as AIDS, Syphilis and Hepatitis infections. After the dermatovenereological examination, subjects' data regarding sociodemographic information, and their answers to the questions regarding HPV hearing, HPV-AGW relationship, HPV-carcinogenesis relationship, transmission routes, risk-factors, and preventative measures were recorded in pre-prepared forms, by a family physician. Awareness was noted as either "aware" or "unaware". Disease awareness was determined according to the count of the "yes" answers. Subjects who answered yes to all of the six questions were evaluated as "aware". Later, each subject was informed about suitable treatment options (solely CT or CT plus TCA applications) according to the location, size, number and extensiveness of the lesions. Subsequently, the subjects were examined by a psychiatrist, and questioned by using two valid questionnaires (ASEX and BDI). After their treatments were performed, the subjects were recommended to be vaccinated.

Scales

BDI: This is a 21-item inventory assessing symptoms of depression. Items are scored on a four- point Likert scale ranging from 0 (absent) to 3 (severe). The total score may range from 0 to 63. Hisli developed reliability and validity of the Turkish version of this test. Cut-off value is 17, and values ≥ 17 indicate depression [13].

ASEX: This scale evaluates sexual functioning in both sexes. It is a brief scale designed to assess the core elements of sexual functioning; drive, arousal, penile erection/vaginal lubrication, ability to reach orgasm, and satisfaction with orgasm. Possible total scores range from 5 to 30, with higher scores indicating more sexual dysfunction. Items are rated on a six-point Likert system. Respondents are classified as having sexual dysfunction if ASEX total score is ≥ 11. Turkish reliability and validity of the scale were performed by Soykan [14].

Data analyse

Obtained data were analyzed using Number Cruncher Statistical System (NCSS) 2007 Statistical Software (Utah, USA) program. Mean, standard deviation, rate and frequency values were used as the statistical descriptions. The independent sample t-test was used to compare the mean duration of the lesions according to cut-off values of BDI and ASEX scales. Chi-square and Fisher exact tests were used for relation between qualitative parameters and scales groups. P value <0.05 was accepted as statistically significant.

Results

Exclusions in data assessment

Some subjects did not want to disclose their sexual preferences, partner numbers, sexual activities in the last two months, presence or absence of a similar lesion in their partners (9,14,9 and 12 patients, respectively). One subject did not want to be completely examined because he was diagnosed with AGW one month previously at another hospital, and only demanded the continuation of the previous CT treatment. Therefore, these subjects were excluded from the assessment of the relevant parameters.

Sociodemographic and sexual life profiles of subjects

One hundred subjects of both sexes (43 female and 57 male) were included in the study. The mean age of subjects was 31.33 ± 8.18 (For females 29.96 ± 7.48, for males 32.55 ± 8.64). The most detected groups according to

sociodemographic parameters were male gender (53%), self-employed (55%), elementary school graduates (50%), <$ 250 monthly income (44%) and married (57%). The most detected groups according to sexual life feature was sexually active (88%), heterosexual (89%), one partner (44%), presence of sexual activity in last three months (75%), and absence of partner's lesion (62%).

Clinical/laboratory examination findings of the patients

Most lesions were located mixedly (40.08%), which was followed by perianal (24.40%) and pubic lesions (12.1%). Perianal lesions mostly were seen in females, whereas pubic ones were in males. In the examinations of the subjects with perianal condiloma, no anal canal or rectal involvement was detected. In 6 of 8 females with vulval condiloma, vaginal involvements were detected. However, no patient had any evidence of HPV in their cervical smears.. The most detected concomitant STD was "TC" (23.03%), and it was only detected in males, whereas all "C" lesions were found in females. Recurrent lesions were found in only three subjects. In the serological tests, one Hepatitis B carrier and one HIV positivity was confirmed.

Results of the psychological questioning

Comparison of the BDI scores according to the predetermined variables is shown in Table 1. Except for the recommended treatments, there was no significant difference between the groups with BDI scores <17 and ≥ 17 according to the investigated points (each at $p > 0.05$). Significantly higher BDI scores were detected in patients who were recommended and received CT+TCA treatment compared to the patients who were recommended and received solely CT ($p<0.003$). Comparison of the ASEX scores according to the predetermined variables is shown in Table 2. There was no significant difference between the two groups with ASEX scores <11 and ≥ 11 ($p > 0.05$).

Table 1. *Comparison of the BDI scores according to the predetermined variables.*

Parameters		BDI < 17 n:63		BDI ≥ 17 n:37		p
Age		31.79 ± 7.61		30.54 ± 9.11		0.462
Gender	Male	37	58.73%	16	43.24%	
	Female	26	41.27%	21	56.76%	0.134
Profession	Housewife	15	23.81%	14	37.84%	
	Civil servant	2	3.17%	2	5.41%	
	Self-employed	38	60.32%	17	45.95%	
	Student	8	12.70%	4	10.81%	0.421
Education	Elementary	30	47.62%	20	54.05%	
	High school	15	23.81%	13	35.14%	
	University	18	28.57%	4	10.81%	0.1
Monthly income	<$ 250	30	47.62%	14	37.84%	
	$ 250-500	22	34.92%	20	54.05%	
	>$ 500	11	17.46%	3	8.11%	0.136
Marital status	Single	23	36.51%	13	35.14%	
	Married	37	58.73%	20	54.05%	
	Widow	3	4.76%	4	10.81%	0.517
Sexually active	No	6	9.52%	6	16.22%	
	Yes	57	90.48%	31	83.78%	0.32
Sexual preference	Heterosexual	58	98.31%	31	96.88%	
	Homosexual	1	1.69%	1	3.13%	0.657
Partner numbers	One	29	51.79%	15	50.00%	
	More than one	27	48.21%	15	50.00%	0.875
Sexual activity in last 3	No	10	17.24%	6	18.18%	

	Yes	48	82.76%	27	81.82%	0.91
Location of the lesions	Corpus penis	4	6.35%	1	2.78%	
	Perianal area	15	23.81%	9	25.00%	
	Perineum	5	7.94%	4	11.11%	
	Pubic area	10	15.87%	3	8.33%	
	Vulva	3	4.76%	5	13.89%	
	Mixed	26	41.27%	14	38.89%	0.517
Partner's lesion	No	42	72.41%	20	66.67%	
	Yes	16	27.59%	10	33.33%	0.575
Therapy	CT	0	0.00%	5	13.51%	
	CT+TCA	63	100.00%	32	86.49%	0.003
Relapse	No	61	96.83%	36	97.30%	
	Yes	2	3.17%	1	2.70%	0.894
Seropositivity for TPHA-	Hepatit B carrier	1	1.59%	0	0.00%	
VDRL-HIV and Hepatitis tests	HIV	0	0.00%	1	2.70%	0.318
	No	62	98.41%	36	97.30%	
Comorbide STD	AIDS	0	0.00%	1	2.70%	
	Candidiasis	3	4.76%	3	8.11%	
	Molluscum contagiosum	2	3.17%	0	0.00%	
	Tinea cruris	14	22.22%	9	24.32%	
	Absent	44	69.84%	24	64.86%	0.487
Awareness of disease and	No	61	96.83%	32	86.49%	
prevention methods	Yes	2	3.17%	5	13.51%	
Duration of the lesions			10.77 ± 14.91		9.53 ± 14	0.677

Table 2. *Comparison of the ASEX scores according to the predetermined variables.*

Parameters		ASEX<14		ASEX ≥ 14		p
Age			32.78 ± 9.82		29.94 ± 5.98	0.087
Gender	Male	28	57.14%	25	49.02%	
	Female	21	42.86%	26	50.98%	0.416
Profession	Housewife	13	26.53%	16	31.37%	
	Civil servant	2	4.08%	2	3.92%	
	Self-employed	28	57.14%	27	52.94%	
	Student	6	12.24%	6	11.76%	0.962
Education	Elementary	24	48.98%	26	50.98%	
	High school	15	30.61%	13	25.49%	
	University	10	20.41%	12	23.53%	0.833
Monthly income	<$ 250	23	46.94%	21	41.18%	
	$ 250-500	16	32.65%	26	50.98%	

	>$ 500	10	20.41%	4	7.84%	0.082
Marital status	Single	16	32.65%	20	39.22%	
	Married	30	61.22%	27	52.94%	
	Widow	3	6.12%	4	7.84%	0.703
Sexually active	No	8	16.33%	4	7.84%	
	Yes	41	83.67%	47	92.16%	0.192
Sexual preferance	Heterosexual	41	97.62%	48	97.96%	
	Homosexual	1	2.38%	1	2.04%	0.912
Partner numbers	One	20	51.28%	24	51.06%	
	More than one	19	48.72%	23	48.94%	0.984
Sexual activity in last 3	No	8	18.60%	8	16.67%	
months	Yes	35	81.40%	40	83.33%	0.808
Location of the lesions	Corpus penis	3	6.25%	2	3.92%	
	Perianal area	7	14.58%	17	33.33%	
	Perineum	4	8.33%	5	9.80%	
	Pubic area	8	16.67%	5	9.80%	
	Vulva	4	8.33%	4	7.84%	
	Mixed	22	45.83%	18	35.29%	0.36
Partner's lesion	No	28	68.29%	34	72.34%	0.678
	Yes	13	31.71%	13	27.66%	
Therapy	CT	3	6.12%	2	3.92%	
	CT+TCA	46	93.88%	49	96.08%	0.614
Relapse	No	46	93.88%	51	100.00%	
	Yes	3	6.12%	0	0.00%	0.073
Seropositivity for TPHA-	Hepatit B carrier	1	2.04%	0	0.00%	
VDRL-HIV and Hepatitis	HIV	0	0.00%	1	1.96%	
tests	No	48	97.96%	50	98.04%	0.368
Comorbide STD	AIDS	0	0.00%	1	1.96%	
	Candidiasis	2	4.08%	4	7.84%	
	Molluscum contagiosum	2	4.08%	0	0.00%	
	Tinea cruris	13	26.53%	10	19.61%	
	Absent	32	65.31%	36	70.59%	0.373
Awareness of disease and	Yes	4	8.16%	3	5.88%	
prevention methods	No	45	91.84%	48	94.12%	0.956
Duration of the lesions			11.78 ± 15.4		8.90 ± 13.62	0.326

Treatment of AGWs and comorbidities

For treatment of AGWs, CT+TCA application to 95 subjects, and sole CT application to 5 subjects were applied. Vaginal lesions were also treated with intravaginal touch-CT. 31 subjects with comorbid STSs such as C, TC or MC were treated with topical or oral antimycotics or curettage of the molluscoid papules. For one subject with AIDS, and another with Hepatitis B, infectious disease consultations were requested.

Patients'awareness about the disease/prevention measures, informing and vaccination

Most subjects described their lesions as nevus, pimple, protuberance, roughness, blemish, wound or scarring. Almost none of the subjects (93%) were aware about HPV, HPV-AGW and HPV-cancer relationship, transmission routes, risk factors and prevention methods. Therefore, all subjects were informed about AGW and related factors, and recommended to get a vaccination. Most of them (n:98) (except for two female) wanted to be vaccinated, and they received three HPV shots, according to the recommendation of World Health Organization (WHO).

Discussion

AGWs mostly occur in sexually active adolescents and young adults [15]. Approximately half of new HPV infections occur among persons aged 15-24 years in the US [16]. Reported risk-factors for HPV infection are early onset of sexual activity, multiple sexual partners, having a previous STS, early age of first pregnancy, and tobacco use [17]. Soori et al. stated that AGWs are most commonly found in 20-30 years old equally in both sexes, heterosexuals, married persons and those married before 20, patients who started to have sex before 15, highly-educated persons, had 2-4 lifetime sexual partners [18]. Subjects in the study were mostly belonged to the following groups: male (53%), married (57%), self-employed (55%), elementary school graduates (50%), <$ 250 montly income (44%), sexually active (88%), heterosexual (89%) and had one partner (44%).

On the other hand, in 20-50% of patients with skin diseases, decline in the QoL may be severe enough to create marked psychosocial impairment or psychiatric morbidity such as clinical DEP [19]. It has been suggested that STDs might result in psychiatric problems, and psychological effects of AGWs have much more significant impact on well-being than physical effects [20,21]. However, information regarding HPV knowledge and associated risk factors, and psychological impacts of these factors in patients with AGWs is very limited [20-22]. Although not vitally important, AGWs create a significant financial burden on the health care system and prevalent psychological stress among these patients [23]. Patients with AGWs may exhibit self-loathing, feelings of anger, shame, guilt, social isolation [12] as well as psychosocial stigmatization, anxiety (ANX), DEP and other psycho-sexual problems [22]. These sequelae affect sexual life as well as health-related QoL [19,24].

Poor management and common recurrences of AGWs can damage a patient's perception of him or herself as a sexually unattractive. The illness perception paradigm has demonstrated that different knowledge and awareness levels of patients about their diseases, and development of their cognitive models can influence their experience and emotional reactions. Patients' cognitive models consist of some core dimensions: identity of their illness, symptoms that they percieve as a part of the illness, what they see as a cause, how much they think the illness can be controlled or cured, duration of the illness, and consequences [25]. Psychological consequences manifest in relation with coping skills and personality traits [26]. The positive-coping strategies indicate the tendency to react or deal with problems in a constructive, direct and positive manner, whereas negative-coping strategies indicate the tendency to react or deal with problems or issues in an avoidant or unconstructive manner [27]. Drolet et al. stated that negative psychosocial impacts on QoL of AGWs were similar for first and recurrent episodes, and especially associated with usual activities, pain/discomfort, ANX/DEP, self-image, sexual activity, partner issues and possible transmission [28]. Similarly, Clark et al. reported that sexual enjoyment and sexual activities were negatively affected by AGWs [29]. However, Dediol et al. found that AGWs do not significantly influence the QoL [30].

Several studies reported lifestyle changes regarding sexual relationships in two-thirds of patients with AGWs, and also high level of DEP associated with their AGWs. Psychosocial consequences result from the obvious fact that AGWs are visible lesions which cause patients to feel fear, embarrassment and discomfort [31]. The psychological effect of AGWs is worry about the future caused by the relationship between HPV and cancer development [19]. Indeed, HPV infections can cause some types of cancer such as cervix, penis, vulva, vagina, anus, oropharynx, tongue and tonsils [32]. The psychological aspect of the illness regarding sexual behaviour is a very important part of patient counseling. Kucukunal et al. showed that men suffering from AGWs had apparent sexual dysfunction, significant ANX or DEP compared to the controls [31]. However, results of the presented study showed that having AGWs did not have a significant influence on subjects' psychosexual life and mood changes, and ninety-three percent of them were not aware of their disease or prevention methods. Indeed, these psychosexual effects of AGWs were not affected by their sociodemographic or sexual life properties, lesions' anatomical locations, presence of comorbid STD, relapse or duration of lesions. Interestingly, significantly higher BDI scores were detected in only patients who received both CT +TCA, compared to the patients who received solely CT. The reason for this result might be related to the fact that combined therapy might be taken more seriously than monotherapy by the patients. We thought that, lack of knowledge of the subjects caused continued sexual activity without adequate protection, and resulted in mild influence on their psychosexual life. In the study, the insignificant results firstly attributed to the patients' lack of knowledge of the illness. However, it was also considered that progression of the illness in a covered part of the body might have caused the subjects to internalize or disregard the lesions. Moreover, during the questioning of the subjects, it was noticed that most of them had misperceptions about their diseases, and described their lesions as nevi, pimples, protuberances, roughness, blemishes, wounds or other kinds of dermatological scars.

Interestingly, some communities or religious persons believe that a health problem is "an exam or punishment given by God to judge or overcome". Some of them think that "an illness is

God's will, it should not be changed, thank God and accept the fate" whereas others consider their illness as "a life or death warning" [33].

Indeed, although most of the lesions of our patients were large and extensive mosaic warts, they were indifferent to their lesions, and did not seek help until AGWs got big enough to attract their attention. Moreover, our study group mostly belonged to religious, low-educated, low-income and low-life-quality Caucasian and Middle Eastern refugee population, and most of them had unfavourable hygiene and did not care about their overall hygiene.

Although our sample size was limited, our results were striking enough to reach significant conclusions. These results may seem contradictory to the general literature. However, because our subject group was composed of refugees, our results are important in terms of reflecting different priorities in their life and unusual psychological perceptions of such peoples who have different cultural, social, ethnic, religious, economic and educational characteristics. The obtained results prove that, this disease which commonly leads negative impacts on persons' psychosexual conditions, can be differently understood or may not be taken seriously by refugee people, depending on their backgrounds, life priorities or poor-QoL, but these results should not be generalized for all patients who have AGWs in Turkey.

Conclusion

In conclusion, psychological impacts stemming from having AGWs should not be neglected. It was thought that this unexpected contradiction obtained in the study is related to patients' low-life-conditions, misperceptions and/or superstitions, or their losses and hopelessness. Therefore, it is very important, and must be kept in mind that different sociocultural and belief backgrounds, or deteriorating living conditions of such patients may influence their life priorities, perceptions of QoL, health expectations, self-evaluation of their diseases, and even severity of psychological impacts of AGWs.

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