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DOES CHRONIC URTICARIA AFFECT BODY IMAGE IN SEXUAL ACTIVITIES? A CASE-CONTROL STUDY  
KRONİK ÜRTİKER CİNSEL YAŞANTIDA BEDEN ALGISINI ETKİLER Mİ? BİR VAKA-KONTROL ÇALIŞMASI

Nurcan UZDIL<sup>1</sup>, Nuray SIMSEK<sup>1</sup>, Mahmut EVLİ<sup>1</sup>, Murat BORLU<sup>2</sup>

<sup>1</sup>Erciyes University, Faculty of Health Sciences, Department of Mental Health and Disease Nursing, Kayseri

<sup>2</sup>Erciyes University, Faculty of Medicine, Dermatological and Venereal Diseases Department, Kayseri

**ABSTRACT**

Sexual functions are often adversely affected in patients with chronic urticaria. There are a limited number of studies on this situation. In this study, it was aimed to evaluate and compare body image in sexual life in patients with and without chronic urticaria. The study was conducted with 70 patients with chronic urticaria as a case group and 70 healthy individuals as a control group. The data were collected using the introductory information form and the Body Exposure during Sexual Activities Questionnaire (BESAQ). In our study, the mean of the BESAQ score of the case group was found to be higher than the control group ( $p<0.05$ ). It was determined that individuals, who reported that they had lesions in their genital areas and that their sexual life was affected by the disease, had high BESAQ scores ( $p<0.05$ ). According to these results, it can be said that the sexual functions of individuals with chronic urticaria were affected. Furthermore, these individuals focus more on their bodies during sexual activities than the control group and avoid sexual intercourse.

**ÖZ**

Kronik ürtikerli hastalarda cinsel yaşam çoğu zaman olumsuz etkilenmektedir. Bu durum ile ilgili sınırlı sayıda çalışma bulunmaktadır. Bu çalışmada kronik ürtikerli olan ve olmayan hastalarda cinsel yaşantıda beden algısının değerlendirilmesi ve karşılaştırılması amaçlanmıştır.

Çalışma kronik ürtikeri bulunan 70 hasta ile vaka grubu ve sağlıklı olan 70 bireyle de kontrol grubu olarak yürütülmüştür. Veriler, tanıtıcı bilgi formu ve Cinsel İlişki Esnasında Bedeni Algılama Ölçeği (CİEBAÖ-BESAQ) kullanılarak toplanmıştır. Çalışmamız da vaka grubunun BESAQ puan ortalamalarının kontrol grubundan yüksek olduğu saptanmıştır ( $p<0.05$ ). Cinsel bölgelerinde de lezyon bulunduğunu ve hastalık nedeniyle cinsel yaşantısının etkilendiğini bildiren bireylerin BESAQ puanlarının yüksek olduğu belirlenmiştir ( $p<0.05$ ). Bu sonuçlara göre kronik ürtiker rahatsızlığı olan bireylerin cinsel yaşantılarının etkilendiği, bu bireylerin kontrol grubuna göre cinsel ilişki esnasında bedenlerine daha fazla odaklandıkları ve cinsel ilişkiden kaçındıkları söylenebilir.

**Keywords:** Body image, sexual activities, chronic urticaria,

**Anahtar kelimeler:** Beden algısı, cinsel yaşantı, kronik ürtiker,

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**Corresponding Author:** Asst. Prof. Nurcan UZDIL, Erciyes University, Faculty of Health Sciences, Department of Mental Health and Disease Nursing, Erciyes University Health Sciences Faculty Central Campus / 38039 Melikgazi-Kayseri, nuzdil@erciyes.edu.tr, ORCID: 0000-0001-8559-8299  
Telephone: + 90 352 437 92 82  
Assoc. Prof. Nuray ŞİMŞEK, nuraysimsek@erciyes.edu.tr, 0000-0003-2325-791X  
Asst. Prof. Mahmut EVLİ, mahmutevli38@gmail.com, 0000-0002-5113-7619  
Prof. Murat BORLU, muratborlu@erciyes.edu.tr, 0000-0003-0824-490X

## INTRODUCTION

Urticaria is a skin disease when itchy red bumps rise above the surface of the skin, disappear over time, and become apparent again. Its prevalence varies between regions stated as 1.4% in Asian countries, 0.5% in European countries and 0.1% in North America (1). The age of onset is usually between 20 and 40 years old. If the period between the beginning of the disease and its end is less than six weeks, it is evaluated as acute urticaria (AU), if it is six weeks or longer, it is considered as chronic urticaria (CU) (2). Chronic urticaria is a long-lasting disease that is seen in 0.05-3% of the general population, and can affect the quality of life of patients negatively and is repetitive and resistant to the applied treatments. Difficulties in achieving a satisfactory outcome within the treatment are common. It has been reported that the number of patients resistant to standard treatment regimens has increased, and some cases may fail despite the long-term diagnosis and follow-up (3).

It has been indicated that chronic skin diseases had a negative effect on the quality of life of patients and caused significant mental disorders. Decreased self-acceptance, low self-esteem, and a negative body image have been noted in patients with visible skin disorders. (4). Moreover, it has been reported that undesirable changes in body appearance and body image of individuals caused by dermatological diseases are associated with embarrassment, anxiety, fear, and various other symptoms (4,5). One of the areas affected by changes in the body is the person's sexual life. Moreover, it is known that women with low body image and dissatisfaction with their own bodies have more frequent sexual avoidance and touching problems. In a study, it was shown that women, who were in a state of excessive awareness of their body image during sex due to their dissatisfaction with their bodies, were less self-confident and frequently avoided sexual intercourse (6). Since people with negative body images do not like themselves, they tend to inhibit sexual intercourse more and have more problems with sexuality. These people have more limited sexual experiences (7).

Chronic urticaria is a disease with visible skin rashes and itching, and it is seen in young and middle age (20-40 years) when sexuality and fertility are at the highest level. Therefore, when planning the treatment and care of chronic urticaria patients, evaluation should be made by using scales that are related to sexuality. When the literature is examined, there are very few studies evaluating the effect of chronic urticaria on sexual life (8-11). In these studies, changes in sexual life due to skin diseases have been examined. However, studies on the relationship between people's body image and sexual activities are limited.

This research was planned as a relational and comparative study to determine the body image in sexual life in patients with chronic urticaria and healthy control individuals, and its relationship with some sociodemographic variables.

The following questions were asked in the study:

1. How do patients with chronic urticaria perceive their bodies in their sexual activities?
2. Is there a difference between patients with chronic urticaria and control individuals' body image in their

sexual activities?

3. Do the symptoms of the disease in patients with chronic urticaria affect the body image in their sexual activities?

## MATERIAL AND METHODS

### Study Design

This research, which is a case-control study, was conducted to determine the body image of chronic urticaria patients and healthy individuals in their sexual life and their relationship with disease symptoms.

### Sample

The research was conducted at the dermatology clinic of a university hospital in Turkey. In the previous studies, the Body Exposure during Sexual Activities have been studied with different groups, and in these studies (12, 13), comparisons have been made based on different variables, not group comparisons. The sample could not be determined in this study because there is no data on body perception during sexual intercourse in the case and control groups in previous studies. A pilot study was needed for this. Teare et al. suggested a pilot trial sample size of 70 to reduce uncertainty around the standard deviation estimation (14). The sample of the study consisted of 70 patients with chronic urticaria and 70 healthy individuals.

The data of the study were started to be collected on February 12, 2018 and continued until July 26, 2019. Individuals in the control group were selected among the relatives and friends of the patients who applied to the outpatient clinic. Besides, due to the repeated admissions of the patients who applied to the outpatient clinic, it was difficult to reach new patients to be included in the study. Therefore, a power analysis was conducted to determine whether the sample size was sufficient or not. In the analysis performed by taking effect size as 0.52 and  $\alpha$  error probability as 0.05, the power of the research was calculated as 0.86 and it was decided that the sample size was sufficient.

### Participants

Individuals, who could speak and understand Turkish, had a diagnosis of chronic urticaria for at least 6 weeks, were 18 years of age or older, had a regular sexual partner, have not undergone a surgical operation in the last three months, were not disabled, did not have a diagnosis of mental disorder, and who approved the Informed Consent Form (ICF), were included in the study. Individuals with similar characteristics in terms of age, gender, education level, family type and employment status were included in the control group. A total of 180 people were invited to the study. Ninety-four of these individuals agreed to participate in the study. However, 24 people hesitated to answer questions about sexuality and filled the demographic variables form. These individuals were excluded from the study because they did not answer the Body Exposure during Sexual Activities Questionnaire (BESAQ). To ensure the equivalence between the groups, the individuals included in the study; age, gender, and educational status were taken into account.

### Data Collection Forms in Research

The data in the study were collected using the introductory information form and BESAQ.

### Introductory Information Form

The introductory information form used in collecting the

data consisted of fifteen questions including the socio-demographic (age, gender, education level, marital status, occupation, etc.) data of the patients and whether their sexual life was affected by the disease.

#### The Body Exposure during Sexual Activities Questionnaire (BESAQ)

The scale, which was developed by Cash et al in 2004 and whose Turkish validity and reliability was determined by Dinç and Kızılkaya Beji (2017), contains 28 items intended to evaluate body image experiences and perceptions during sexual intercourse (7,12). Within the scope of BESAQ, the awareness of the person's body during sexual intercourse, sexual intercourse experiences, anxiety caused by focusing on body image and expressions about avoiding their sexual partner due to body image are evaluated. The scale is applied to all female/male individuals who are 18 and over each item is a five-point Likert type that can score between 0 and 4. These scores were as 0 = Never, 1 = Rarely, 2 = Sometimes, 3 = Often, and 4 = Always or almost always. The total score to be obtained from the scale is calculated by dividing the total score from all items by the number of questions. Higher scores on the scale reflect the more conscious focus and avoidance of sexual intercourse. The Cronbach's alpha value of the scale has been reported as 0.806. For our study, this value was calculated as 0.833.

#### Data Collection

Researchers collected the data using the face-to-face interview technique. The patients who applied to the outpatient clinic and their relatives were interviewed in a room reserved for this interview. Afterwards, the purpose of the study was explained and questionnaires were given to the participants who accepted, and the individuals filled the forms themselves. Patients and their relatives were interviewed one by one. During the answering period, the researchers were with the individuals and answered the questions asked about the forms. Filling the forms took about 10 minutes.

#### Ethical Statements

To conduct the research, approval from the Clinical Research Ethics Committee (2018/45) and institutional

permission from the Health Application and Research Center were obtained. Written and verbal consent was obtained from the participants before data were collected.

#### Statistical Analysis of Data

IBM SPSS Statistics Standard Concurrent User V 25, (IBM Corp.; Armonk, NY, USA) was used in the study. While age, gender, working status, graduation, and family type were the independent variables of the study, BESAQ scores were the dependent variable. Descriptive statistics were used in the evaluation of the data, while skewness (0.723) and kurtosis (1.000) values were used for the assessment of conformity to the normal distribution (15). Moreover, the Student's t and ANOVA tests, which are among the parametric statistical tests, were applied because the data were normally distributed. In order to determine the effect of groups on BESAQ scores, ANCOVA analysis was performed by adjusting for sociodemographic characteristics and age. The relationship between age and scale score was compared with the Pearson correlation coefficient. The changes in the BESAQ means according to the lesion in the genital area and the affecting of sexual life were analyzed with a two-way analysis of variance. Analysis results were presented as mean  $\pm$  s. deviation. In comparison, a value of  $p < 0.05$  was considered statistically significant.

#### RESULTS

The distribution of the groups according to the descriptive characteristics is given in Table I. In our research, we studied with two groups, control group and case group. Individuals in the case and control group showed similarities according to their descriptive characteristics. The average age of the participants in the group diagnosed with urticaria was  $41.70 \pm 10.41$ . Moreover, 71.4% of them were women, 81.4% of them belonged to a nuclear family, 47.1% of them were primary school graduates, and 74.3% of them did not have any job. In the control group, these rates were  $42.12 \pm 10.48$ , 71.4%, 85.7%, 34.3% and 72.9%, respectively.

Table II shows the relationship between socio-demographic characteristics and BESAQ scores of the

**Table I.** Comparison of individuals in the case and control groups according to their descriptive characteristics

Variables	Case Group (n:70)		Control Group(n:70)		Test	p
	n	%	n	%		
<b>Gender</b>						
Female	50	71.4	50	71.4		
Male	20	28.6	20	28.6		
<b>Working Status</b>						
Working	18	25.7	19	27.1	0.000*	>0.999
Not working	52	74.3	51	72.9		
<b>Graduation</b>						
Primary school	33	47.1	24	34.3	2.590*	0.460
Middle School	14	20.0	18	25.7		
High school	17	24.3	22	31.4		
College/University	6	8.6	6	8.6		
<b>Family Type</b>						
Nuclear Family	57	81.4	60	85.7	0.208*	0.648
Extended Family	13	18.6	10	14.3		

\*chi-square test

**Table II.** Relationship between socio-demographic characteristics and BESAQ scores of the participants

Variables	Case Group (n:70)	Control Group (n:70)	
<b>Gender</b>	Mean±SD	Mean±SD	p
Female	1.96±0.65	1.64±0.61	<b>0.005</b>
Male	1.79±0.49	1.56±0.20	0.155
p	0.297*	0.433*	
<b>Graduation</b>			
Primary school	2.08±0.56 <sup>a</sup>	1.65±0.60	<b>0.002</b>
Middle School	1.65±0.37 <sup>b</sup>	1.60±0.54	0.866
High school	1.98±0.78 <sup>ab</sup>	1.59±0.50	<b>0.036</b>
College/University	1.38±0.26 <sup>b</sup>	1.69±0.29	0.240
p	<b>0.001**</b>	0.932**	
<b>Working Status</b>			
Working	1.72 ± 0.44	1.55 ± 0.22	0.138
Not working	1.98 ± 0.66	1.65 ± 0.61	<b>0.009</b>
p	0.069*	0.332*	
<b>Family Type</b>			
Nuclear Family	1.89 ± 0.61	1.62 ± 0.54	<b>0.011</b>
Extended Family	2.01 ± 0.67	1.65 ± 0.48	0.141
p	-0.150**	0.882**	

<sup>a,b</sup>:No difference between groups with the same letter for each measurement, \*Independent samples t-test, \*\*One-Way Analysis of Variance,, mean ± sd. BESAQ: The Body Exposure during Sexual Activities Questionnaire

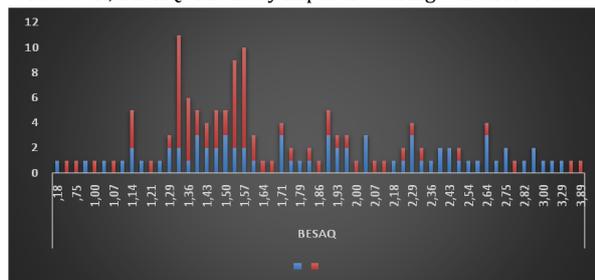
participants. Considering the mean scores of the case group and control group according to gender, employment status and family type, it was determined that there was no statistically significant difference (p>0.05). When the mean scores of the individuals in the case group according to graduation were examined, a statistically significant difference was found between the mean scores of the individuals who graduated from primary school (2.08±0.56) and the mean scores of the individuals who graduated from secondary school (1.65±0.60) (p<0.05). At the same time, statistically significant difference was found between the mean scores of individuals who graduated from primary school and the mean scores of individuals who graduated from secondary school (1.38±0.26) (p<0.05). Table III shows effect of groups on BESAQ scores. The main effect of the groups on the mean BESAQ score was statistically significant (p <0.05). Figure I shows comparison BESAQ scores mean of participants.

Table IV shows the situation of being affected in the sexual life of individuals in the case group. The majority of patients in the case group individuals (48.6%) have been living with the disease for 2-5 years. However, there were fewer people (14.3%) who have been ill for 10 years or more and they had higher BESAQ scores. Patients with 14.3% reported that they also had lesions in their genital areas, and it is seen that these individuals had high BESAQ scores (p <0.05). Half of the participants reported that the disease affected their sexual life, but only 17.1% of these individuals stated that they applied to a specialist because of their sexual problems. BESAQ scale scores of the individuals who reported that their sexual life was affected were found to be high, and the difference in scores was statistically significant (p <0.05). It was observed that individuals who reported that their sexual life was affected, mostly experienced a decrease in the frequency of sexual activities (32.86%).

**Table III.** Effect of groups on BESAQ scores

Groups	Type III Sum of Squares	df	Mean Square	F	p	Partial Eta Squared
Groups	2.593	1.000	2.593	7.821*	0.006	0.056

\* ANCOVA, BESAQ: The Body Exposure during Sexual Activities Questionnaire



**Figure I.** Comparison BESAQ Scores Mean of Participants

Table V shows the mean, standard deviation, and correlation of BESAQ and other variables. BESAQ mean scores in the case group (1.92 ± 0.62) were found to be higher than the mean scores in the control group (1.62 ± 0.53). In the case group, statistically and positive correlation was found between age and BESAQ mean score (r=0.260; p<0.05) at a weak level. In the control group, there was no statistically significant relationship between age and the BESAQ mean score (r=0.104; p>0.05).

**Table IV.** BESAQ score distribution according to being affected in sexual life

Variables	n(%)	Mean±SD	t	p
<b>Disease Duration</b>				
3 month-1 year	17(24.3)	1.67±0.53		
2-5 year	34(48.6)	2.01±0.62		
6-10 year	9(12.8)	1.76±0.51	1.831**	0.150
10 year and above	10(14.3)	2.15±0.72		
<b>Lesion in the Genital Area</b>				
Yes	10(14.3)	2.35±0.60	2.544*	<b>0.013</b>
No	60(85.7)	1.84±0.59		
<b>The situation of being affected in sexual life</b>				
Affected	35(50.0)	2.12±0.56	2.933*	<b>0.005</b>
Not affected	35(50.0)	1.71±0.60		
<b>Effect on sexual life (n: 35)</b>				
Reduced sexual intercourse frequency	23(32.86)	2.10±0.58		
Difficulty focusing on pleasure during sexual activity	3 (4.28)	1.60±0.43	1.808**	0.166
Not expressing sexual desires	2 (2.86)	2.73±0.47		
Setting limits on your partner for sexual behavior	7 (10.0)	2.20±0.40		
<b>Application to a Specialist Due to Sexual Problems</b>				
Applied	7(10.0)	1.89 ± 1.00	-0.101*	0.920
Not applied	63(90.0)	1.92 ± 1.00		

\*Independent samples t-test, \*\*One-Way Analysis of Variance, mean ± sd. BESAQ: The Body Exposure during Sexual Activities Questionnaire

**Table V.** The mean, standard deviation and correlation values of BESAQ scores and other variable

Variables	Case Group (Mean ±SD)		Control Group (Mean ±SD)	
	1	2	1	2
BESAQ	1.92±0.62		1.62±0.53	
1. Age	-	-	-	-
2. BESAQ score means	0.260*	-	-0.104	-

Pearson correlation coefficient was used. BESAQ: The Body Exposure during Sexual Activities Questionnaire; \*p<0.05

Table VI show the descriptive statistics of BESAQ scores and univariate analysis results in the case group according to the effect of sexual life and the lesion status in the genital area. The main effect of lesion status in the genital area on BESAQ scores was found to be statistically significant (p=0.028). The BESAQ scores of those with lesions in the genital area were found to be 2.36, while the scores of those without lesions were found to be 1.84. The main effect of sexual life on BESAQ scores was not statistically significant (p=0.826). The interactions between the lesion in the genital area and its effect on sexual life were not found statistically significant (p=0.154). Besides, 13.9% of BESAQ scores are ac-

counted for by a lesion in the genital area, its effect on sexual life, and lesion in the genital area\* affecting sexual life.

## DISCUSSION

One of the effects resulting from the changes in the body in chronic urticaria patients is on the sexual life of the person. In our study, firstly, the answer to the question of how chronic urticaria patients perceive their bodies during sexuality was sought. In our study, the mean BESAQ scores of the patients were close to the mean (Table V). In this context, it can be said that individuals are moderately affected in their sexual lives. This sug-

**Table VI.** Univariate analysis results according to BESAQ scores in the case group according to the effect of sexual life and lesion status in the genital area

	Test Statistics	p	Partial Eta Squared	R <sup>2</sup>
Lesion in the genital area	5.034*	<b>0.028</b>	0.071	
The situation of being affected in sexual life	0.049*	0.826	0.001	
Lesion in the genital area*The situation of being affected in sexual life	2.076*	0.154	0.030	0.139

\*Two-Way Analysis of Variance, BESAQ: The Body Exposure during Sexual Activities Questionnaire

gests that individuals focus more on their bodies during sex and avoid sexual intercourse. Body image of the person affects both behavioral (such as avoiding sexuality) and cognitive components of sexuality (such as sexual confidence, sexual desire and sexual satisfaction). It has been reported that negative body image can reduce sexual arousal. It has been stated that this can also affect sexual satisfaction and the pleasure experienced during sexuality. Sexuality can be avoided as a result of the low sexual satisfaction that occurs in the majority of sexual attempts (16). In a study, it was shown that women who were in a state of excessive awareness of their body image during sexual activities due to dissatisfaction with their bodies, had less self-confidence and avoided sexual intercourse more frequently (6). Sukan and Maner (2007) reported in their study that women with vitiligo and chronic urticaria had lower sex drive scores compared to the control group, furthermore, women had difficulty in sexual arousal, and had difficulty in the formation and maintenance of the lubrication and expanding in the vagina as a response to sexual excitement until sexual activity ended (8). In this study, it was found that the mean BESAQ score of the women in the case group was high. This can be interpreted as sick women focus more on their bodies during sex and their perceptions are negative. At the same time, it was observed that the average BESAQ scores increased as the age increased in the case group (Table V). Accordingly, it can be said that older individuals are more inclined to consciously focus on their bodies and avoid sexual intercourse.

For the second question of our study, it was observed that the mean BESAQ scores of patients in the case group were higher than the control group (Table III, Table V and Fig. 1). It is thought that individuals with chronic urticaria focus more on their bodies during sexual activities and avoid sexual intercourse. In the study conducted by Mercan et al., it was reported that individuals with dermatological disorders showed more sexual avoidance behavior and experienced orgasm problems compared to the control group. It was reported that this situation was associated with changes in body and body image and mental deterioration (17). Previous studies show that individuals with negative body image avoided sexuality and were more prone to sexual dysfunction (18-20). On the other hand, in our study, although statistically significant; the difference between the scores of the two groups was very small. In this case, since it is difficult to make a comprehensive interpretation, it is thought that it would be appropriate to clarify the impact areas with qualitative designed studies.

The third question we sought to answer in our study was whether the symptoms of the disease had an effect on body image during sexuality. In our study, it was found that the BESAQ mean scores of patients who reported lesions in their genital area were higher (Table IV). Again, half of the patients stated that their sexual life was affected after the disease. The BESAQ score means of individuals who stated that their sexual life was affected were also found to be high. In addition, it is seen that these variables explain 13.9% of the changes in the BESAQ scores of the patients. However, it was determined that this effect was caused by lesions espe-

cially in the genital area (Table VI).

It is seen that the majority of individuals who reported that their sexual life was affected, experienced sexual inadequacy and there was a decrease in the frequency of sexual activity. In different studies, it has been reported that genital area lesions in dermatological diseases had an effect on sexual life (21-23). On the other hand, there are studies reporting that symptom severity affected sexual functions and caused dysfunctions in terms of sexual satisfaction, desire and sexual arousal in patients with chronic urticarial (10,24). Sampogna et al. (2017) conducted a study with 3,485 dermatology patients and reported that 23.1% of the patients had sexual problems, and that sexual dysfunction was particularly high in patients with psoriasis, urticaria, eczema, skin infections or itching (9). Sorour et al. (2017) reported the rate of sexual disorders as 21.82% in individuals with dermatological diseases (25). Moreover, Ertaş et al. (2019) found in their study with female patients with chronic spontaneous urticaria that the sexual function scores of the patient group decreased significantly compared to the control group, and 2 (67.9%) of 3 patients had sexual dysfunction (11). Gündüz et al. (2020) reported that the sexual disorder levels of psoriasis patients were higher than the control group, and the most important risk factor affecting sexual life was the change in body image due to skin involvement (26). Our study results are similar to the literature in terms of being affected of sexual life. However, it is thought-provoking that only 17.1% of the individuals, who reported that their sexual life was affected by the disease, applied to a specialist due to this problem.

#### Limitations of the Study

The findings of this study are limited to the answers given by the individuals participating in the study to the measurement tool. Moreover, a study was conducted with individuals with a diagnosis of urticaria and the effect of urticaria on sexual life was evaluated. However, another limitation of the study is that it does not include the presence of other chronic diseases or conditions such as obesity that may affect sexual life. In addition, the questions of having a lesion in the genital area and affecting the sexual life due to the disease were asked only to the case group, and a comparison with the control group could not be made. This situation can also be considered as a limitation of the study.

#### CONCLUSIONS

In conclusion, it was determined that the sexual life of individuals in the case group was affected, and they focused more on their bodies during sexual activities and avoid sexual activities. Accordingly, changes in the body of patients in the case group and accordingly changing body image affected their sex life negatively. Therefore, the treatment and care process should be followed in a versatile way in patients with chronic urticaria. In addition to the treatment of skin lesions, it is recommended to evaluate body image and sexual lives and to be included in the treatment plan. It is recommended that nurses also counsel patients at the point of sexual care. Furthermore, it is thought that using the measurement tools, which were designed to reveal such problems of patients in countries such as Turkey where talking and experiencing sexuality are seen as taboo,

will be beneficial for further studies. Different measurement tools or qualitative studies that can explain the impact of sexual life in patients with urticaria will also be useful in evaluating the problem from multiple perspectives and planning consultancy services.

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#### Conflict of Interest

No conflict of interest has been declared by the author(s)

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