ORIGINAL ARTICLE

# Assessment of Chronic Pelvic Pain and Quality of Life among Women of Childbearing Age

## <sup>1</sup>Kevser Ozdemir, <sup>2</sup>Nebahat Ozerdogan, <sup>3</sup>Alaettin Unsal

<sup>1</sup>Sakarya University, School of Health Sciences, Sakarya
<sup>2</sup>Eskisehir Osmangazi University, School of Health Sciences, Eskisehir
<sup>3</sup>Osmangazi University, Medical Faculty, Public Health Department, Eskisehir
\*email: <u>hulyaozturk33b@gmail.com</u>

ABSTRACT: The present study was performed with the aim of determining the prevalence of chronic pelvic pain, investigating a number of factors which are thought to be associated, and evaluating quality of life in women of childbearing age. This is a cross-sectional study performed with the women of ages 15-49 years in Sakarya, included 1765 women, during the period between 2010-2011. The self-administered questionnaire consisted of McGill Pain Questionnaire and the SF-36 Quality of Life questionnaire. Student's t test, chi-square test and logistic regression analyses were used for the assessments. The prevalence of chronic pelvic pain was found as 12.2% in the present study. The logistic regression analysis on the variables which are considered to be associated with chronic pelvic pain demonstrated that menstrual irregularity (OR=3.793), dysmenorrhoea (OR=3.075), dyspareunia (OR=6.038) and history of any gynaecological disorder diagnosed by a physician (OR=2.747were significant risk factors for chronic pelvic pain. Women with chronic pelvic pain had significantly lower meanscores from all domains of the SF-36 Quality of Life questionnaire except for the mental health domain. The present study demonstrated that health-related quality of Life was poorer in women with chronic pelvic pain.

KEYWORDS: chronic pelvic pain, women of childbearing age, quality of life, Turkey

### DOĞURGAN ÇAĞ KADINLAR ARASINDA KRONİK PELVİK AĞRI VE YAŞAM KALİTESİNİN DEĞERLENDİRİLMESİ

ÖZET: Bu çalışma, doğurgan çağ kadınlarda Kronik Pelvik Ağrı sıklığının saptanması, ilişkili olduğu düsünülen bazı faktörlerin incelenmesi ve yaşam kalitesinin değerlendirilmesi amacıyla yapılmıştır. Çalışma, 15 Eylül 2010 - 15 Ekim 2011 tarihleri arasında Sakarya il merkezi Güneşler Sağlık Ocağı bölgesinde yaşamakta olan 15-49 yaş grubu kadınlar üzerinde yapılan kesitsel tipte bir araştırmadır. Sağlık Ocağı bölgesinde yaşayan 15-49 yaş grubu kadın sayısı 2858 olup, bunlardan 1765'i (%61.8) calısma grubunu olusturmustur. Calısma süresince Sağlık Ocağı bölgesindeki haneler dolasılarak evde bulunan ve çalışmaya katılmayı kabul eden kadınlara anket formlar yüz yüze görüsme yöntemi ile araştırmacılar tarafından dolduruldu. Yaşam kalitesi değerlendirilmesi için SF- 36 Sağlıkla ilişkili Yaşam Kalitesi Ölçeği kullanıldı. Analizler için Student t testi, Ki- kare testi ve Lojistik regresyon analizi kullanıldı. İstatistiksel anlamlılık için p<0.05 değeri kabul edildi. Bu çalışmada Kronik Pelvik Ağrı sıklığı %12.2 (n=216) olarak bulundu. Kronik Pelvik Ağrı ile ilişkisi olduğu düşünülen değişkenlerle yapılan lojistik regresyon analizi sonucuna göre, adet düzensizliği (OR: 3.793; p=0.001), dismenore (OR: 3.075; p=0.021), disparoni (OR=6.038; p<0.001), hekim tanılı herhangi bir jinekolojik hastalık öyküsünün (OR=2.747; p=0.016) Kronik Pelvik Ağrı için önemli risk faktörleri olduğu saptanmıştır. Kronik Pelvik Ağrı şikayeti olanların SF-36 Yaşam Kalitesi Ölçeğinin mental sağlık alt alanı (p>0.05) dışındaki diğer tüm alt alanlarından aldıkları puan ortalamalarının anlamlı bir sekilde daha düşük olduğu bulunmuştur (her biri için; p<0.05). Bu çalışmada, doğurgan çağ kadınlar arasında Kronik Pelvik Ağrının önemli bir sağlık sorunu olduğu ve Kronik Pelvik Ağrısı olan kadınların sağlıkla ilişkili yaşam kalitelerinin daha kötü olduğu saptanmıştır..

ANAHTAR KELİMELER: Doğurgan çağ kadın, Kronik Pelvik Ağrı, SF-36.

## 1. Introduction

Acknowledged as a symptom or group of symptoms, chronic pelvic pain (CPP) is defined by the Royal Collage of Obstetricians and Gynaecologists as constant or intermittent pain not associated with menstruation, pregnancy or sexual activity, located at the pelvis or the lower abdomen and persisting for at least 6 months (1).

Chronic pelvic pain is a common health problem in women and has a multifactorial aetiology. Several pathologic states of visceral or somatic origin may cause chronic pelvic Gynaecological, pain. urological, musculoskeletal and psychoneurological factors should therefore be considered in the assessment of chronic pelvic pain (2-4). Possible causes of chronic pelvic pain include endometriosis, pelvic inflammatory disease, adhesions. irritable bowel syndrome, interstitial cystitis, urethral syndrome and pelvic congestion syndrome. Obstetric causes of chronic pelvic pain include peripartum pelvic pain syndrome, delivering large babies, muscles weakness and poor physical development, complicated labour. and delivery with vacuum or forceps (5-6).

Known risk factors for chronic pelvic pain are women aged 25-30 years, women with low socioeconomic status and smoking (7-9). Chronic pelvic pain prevalences of higher than 20.0% have been reported in women with history of pelvic inflammatory disease. 8 Similarly, early menarche age, prolonged, intensive and irregular menstrual cycles in the gynaecological history constitute risks factors for chronic pelvic pain (8,10).

Correct estimation of the prevalence of chronic pelvic pain is challenging since most women believe that this pain is a part of their lives which keep them from seeking support. 9 Reported prevalence of chronic pelvic pain varies between 14.7 - 25.4% in some studies (5, 11-14). No study on the prevalence of chronic pelvic pain in Turkish women could be identified. Mental disorders including stress and depression, divorces, familial issues and aggression are known to be more common among women with chronic pelvic pain (8,15).

Quality of life can be defined as a subjective feeling that the individual's life is changing entirely for the better and may also be described as how the individual perceives his/her state within the culture and value system. Health-related quality of life is a tool with increasing acceptability to determine the functional impact of a disease (16). Chronic pelvic pain is a problem with negative influences on women's quality of life. Women suffering from chronic pelvic pain experience anxiety and fear about their functionality both at home and the workplace (17). Chronic pelvic pain affects 33.0% of the women during their lifetimes and 11.0% during childbearing ages (11). In a study by Mathias et al, 14.7% of the women had chronic pelvic pain, of whom 11.0% experienced limitations in their daily activities, 11.9% had sexual problems and 15.8% received medical treatment for this condition (12). A study by Schlesinger reported adverse impact on sports, exercise, social life, household work and sexual life (18). In a study by Grace and Zondervan, sleep disorders were more common in women with chronic pelvic pain, with daily activities being adverse affected in about half of the women, and the authors reported that 12.2% of the women were unable to perform any activities without taking an analgesic or resting, and that 14.3% had to limit their movements (5).

Body image, self-esteem, confidentiality and sexuality as well as financial means are adversely affected in women with chronic pelvic pain. It is estimated that around 2.8 million USD is allocated annually for the treatment of chronic pelvic pain in the USA. It is reported that this figure would be as high as 555 million USD per year if costs associated diagnostic procedures, with surgical interventions, hospitalizations and days lost at work are added to the sum (12). Given its negative impacts on women's health and significant financial burden, chronic pelvic pain evidently represents a major public problem.

Chronic pelvic pain is a common problem among women and has adverse physical, social, psychological and economical impacts. A multidisciplinary team is involved in pain control, and assessments including all aspects of pain and its management are accomplished by this team (19). A number of characteristics distinguish the nurse from other members of the team: the nurse spends more time with the patient than other members of the team, familiarizes with the patient's previous pain experiences and her methods to cope with the pain, and makes use of these as necessary. Connected with these, the nurse is also in the unique position to teach the patient the methods to cope with pain, provide guidance, administer the planned treatments and evaluate the outcomes, and to establish an empathic approach and sympathy (20).

The present study aims to determine the prevalence of chronic pelvic pain, investigate a number of factors which are thought to be associated, and evaluate quality of life in women aged 15-49 years.

#### 2. Materials and Methods

This is a cross-sectional study performed with women aged 15-49 years residing in the service area of Güneşler Community Healthcare Centre (Family Healthcare Centre) in Sakarya, between 15 September 2010 and 15 October 2011.

Because the study was performed during the period of transition to the Family Medicine Model of healthcare in Turkey, local healthcare centres providing first line healthcare started functioning under the title of Family Health Centres with their existing institutional names during this period. The research area was planned as that of a Local Health Care Centre, which was therefore changed to Family Health Centre later on. Güneşler Local Healthcare Centre (Family Health Centre) is one of the 16 healthcare centres serving to the population in central Sakarya. The service area of the local healthcare centre covers a total population of 10951, of which 5665 (51.7%) are males and 5286 (48.3%) are females. Of the female population, 54.1% (n=2858) are 15 to 49 years of age.

Prior to study initiation, authorization (decision no. 2010/141, 2010/232) of the Ethics Board of the Medical Faculty of Eskişehir Osmangazi and appropriate approvals of the Provincial Health Directorate of the city of Sakarya were received.

A questionnaire based on the study purpose was developed in light of the literatüre (5, 21-23). The questionnaire includes items on a number of socio-demographics (age, employment, education. marital status, familial income level, family type, smoking/drinking habit), a number of menstrual characteristics (age at menarche, menstrual regularity, presence of dysmenorrhoea and use of contraception), McGill Pain Ouestionnaire and the SF-36 Quality of Life questionnaire.

During the study period, each household located within the service area of Günesler Healthcare Centre were visited and a total of 1765 women (61.8% of the 2858 women) who were present at their houses at the time of visits and agreed to participate in the study constituted the study population. Women who could not be contacted during house visits, those who declined to participate in the study, pregnant women, women in the next 6-week period after birth and those with whom it was not possible to establish communication were excluded. Oral consents were received from the women after providing them with regarding information the study. The questionnaires prepared previously were completed by the investigators during face-toface meetings with the women. Interviews were conducted in women's homes. This process took about 25-30 minutes.

After completion of the questionnaire, body weight and height measurements were performed with bathroom type scales and measuring tape, respectively. Body mass index (BMI) was calculated by dividing the body weight in kilograms by height in meters squared.

Women with constant or intermittent pain at the lower abdomen and inguinal region not associated with menstruation, pregnancy or sexual intercourse during the past 6 months were considered to have "Chronic Pelvic Pain" (1).

McGill Pain Questionnaire was used to evaluate a number of aspects of pain. McGill Pain Questionnaire was developed by Melzack and Torgerson (24) and its validity and reliability in the Turkish population was established by Kuğuoğlu et al (25). The location and several aspects (sensory, affective, evaluative, miscellaneous), temporal relationship and severity of the pain can be determined with the questionnaire (24).

SF-36 Health-Related Quality of Life questionnaire was utilized to evaluate quality of life. SF-36 was developed by Ware and Sherbourne in 1992 and its validity and reliability in the Turkish population was established by Koçyiğit et al. (26-27). This questionnaire includes 36 items and evaluates quality of life under 8 domains (physical functioning, physical role, social functioning, emotional role, mental health, vitality, pain, general health perception). Domain scores of the questionnaire range between 0 and 100, with the higher scores indicating better quality of life.

Individuals who had the habit of smoking at least one cigarette a day regularly were considered as smokers. Those who consumed alcohol in at least one occasion a week (300 g ethanol) were considered to have drinking habit (28). Those with BMIs of 30 kg/m2 and above were considered obese (29). The present study considered women with genital pain before, during and after sexual intercourse to have dyspareunia (30). Those with pain in the leg, inguinal and waist regions a day before and/or in the first day of menstrual period were considered to have dysmenorrhoea (31).

# Statistical analysis

Data are expressed as mean  $\pm$  standard deviation except for non-Gaussian parameters that are presented as median and interquartile range (IQR). Categoric data are presented by absolute values and percentages (%).Statistical significance between the groups for continuous variables used the Mann-Whitney U test for nonparametric data. Statistical analyses used SPSS 20.0 software (IBM Corp, Armonk, NY). The Pearson  $\Box 2$ test was used for categoric variables, as appropriate. Data were analyzed by Spearman rank correlation and logistic regression analysis Statistical analyses used SPSS 20.0 software (IBM Corp, Armonk, NY). A P value of <0.05 considered statistically significant.

# 3. Results

The ages of the women in the study group ranged between 15 and 49 years, with a mean age of 31.51±9.50 years. Of the women in the present study, 21.4% (n=331) were smokers without chronic pelvic pain and 27.3% (n=59) were smokers with chronic pelvic pain (p<0.001); 5.6% (n=86) had drinking habit without chronic pelvic pain and 7.9% (n=19) had drinking habit with chronic pelvic pain (p>0.05); 15.6% (n=230) were obese women without chronic pelvic pain, 6.4% (n=13) were obese women with chronic pelvic pain (p<0.001). Of them, 1223 (13.8%) had urinary incontinence and 47 (2.7%) had waist pain. Of the sexually-active women, 149 (15.2%) reported dyspareunia without chronic pelvic pain and 91 (61.9%) reported dyspareunia with chronic pelvic pain (p<0.001). Ages at menarche ranged between 10 and 18 years, and the mean age at menarche was 12.97±1.18 years. Menopause was described by 120 (7.7%) without chronic pelvic pain and by 29 (13.4%) with chronic pelvic pain (p<0.05). The frequency of dysmenorrhoea was 57.9% (n=937) among the menstruating women(55.1% (n=788) without chronic pelvic pain and 79.7% (n=149) with chronic pelvic pain (p<0.001).

The incidence of chronic pelvic pain was 12.2% (n=216) in this study and was significantly higher among women aged 25-34 years (p<0.001). The incidence was higher among the women who were smokers, unemployed, had good level of familial income, had nuclear type of family structure, had history of a disease requiring chronic drug treatment, history of treatment with antidepressants, history of endometriosis, history of pelvic inflammatory disease (PID), history of adenomyosis, history of ovarian cyst, current urinary incontinence, current waist pain, current dyspareunia, history of abortion, whose age at menarche was 12 years and below, those with menstrual irregularity. current dysmenorrhoea and menopausal women (p<0.05 for each). Marital status, educational level, drinking habit, obesity, history of gynaecological surgery, number of pregnancies, number of curettages were not significantly associated with the incidence of chronic pelvic pain (p>0.05 for each).

The results of the logistic regression analysis using variables that were found to be associated with chronic pelvic pain including age, employment status, familial income, family type, smoking, history of disease that require chronic drug treatment, history of treatment with antidepressants, physiciandiagnosed endometriosis, PID, adenomyosis and ovarian cyst history, urinary incontinence, abortion history, age at menarche, menstrual regularity and dysmenorrhoea are presented in Table 1.

### Table 1

Results of the logistic regression model obtained with variables found to be associated with CPP in the study group (final line: 5) (n=1765)

	10	1 0	, ,		
Variables	ß	SE	р	OR	95% CI
Constant	5.239	0.396	<.001		
Age group (reference: aged 35 and					
above)					
<i>≥</i> 24	0.063	0.317	0.842	1.065	0.572-1.985
25-34	1.258	0.242	<.001	3.519	2.190-5.655
Employment status (reference:					
unemployed)					
Employed	0.574	0.183	0.002	1.775	1.240-2.540
Familial income (reference: moderate)					
Poor	0.598	0.195	0.002	1.819	1.242-2.665
Good	1.066	0.324	.001	2.903	1.539-5.478
Family type (reference: extended family)					
Nuclear family	0.487	0.243	0.045	1.627	1.010-2.619
Smoking (reference: non-smoker)					
Smoker	0.350	0.202	0.083	1.419	0.955-2.109
History of antidepressant therapy					
(reference: none)					
Yes	0.433	0.230	0.060	1.542	0.982-2.422
PID history(reference: none)					
Yes	2.212	0.533	<.001	9.133	3.215-25.942
Ovarian cyst history (reference: none)					
Yes	0.913	0.216	<.001	2.492	1.630-3.808
Abortion history (reference: none)					
Yes	0.590	0.261	0.024	1.803	1.081-3.009
Age at menarche (reference: 13 years)					
≥14	0.197	0.230	0.393	1.217	0.776-1.910
≤12	0.521	0.211	0.014	1.684	1.112-2.548
Menstrual regularity (reference: regular)					
Irregular	0.476	0.188	0.011	1.609	1.114-2.325
Dysmenorrhoea (reference: none)					
Yes	0.930	0.215	<.001	2.535	1.664-3.860

SE: Standard error, OR : Odds ratio, CI: Confidence interval

Mean scores of women with chronic pelvic pain were significantly lower in all domains of the SF-36 questionnaire except for the Mental Health domain (p>0.05) compared to women without chronic pelvic pain (p<0.05 for each). Mean (median) scores from the SF-36 Health-Related Quality of Life questionnaire of women with and without chronic pelvic pain are presented in Table 2. There was a significant negative correlation between the scores from "evaluative" domain of the McGill Pain Scale and scores from each domain of the SF-36 questionnaire in the study group (p<0.001 for each domain). Scores from the "sensory, affective and miscellaneous" domains of the McGill Pain Scale were not correlated with the "mental health" domain of the SF-36 questionnaire 18

(p<0.05 for each). The results of the correlation analysis between the scores from McGill Pain Scale domains and SF-36

domains obtained by the women in the study group are presented in Table 3.

	SF-3		
Domains	Chronic		
	No (n=1549) Median (min-max)	Yes (n=216) Median (min-max)	p value
Physical functioning	90 (0-100)	70 (0-100)	<.001
Role limitations due to physical problems	100 (0-100)	75 (0-100)	<.001
Bodily pain	70 (11-100)	44 (0-100)	<.001
General health perception	58 (2-100)	52 (0-91)	<.001
Vitality	58 (0-100)	42 (0-83)	<.001
Social functioning	71 (0-100)	57 (0-100)	<.001
Role limitations due to emotional problems	100 (0-100)	67 (0-100)	<.001
Mental health	50 (6-100)	56 (0-94)	0.622
Physical health (PCSc) scores	76 (21-100)	58 (4-89)	<.001
Mental health (MCSc) scores	64 (7-92)	55 (9-87)	<.001

### Table 2

Average scores subjects received from SF-36 domains by status of chronic pelvic pain

## Table 3

The results of the correlation analysis between the scores from McGill Pain Scale domains and SF-36 domains obtained by the women in the study group (n=216)

	McGill Pain Scale domains			
SF-36 Domains	Sensory	Affective	Evaluative	Miscellaneous
	r <sub>s</sub> ; p	r <sub>s</sub> ; p	r <sub>s</sub> ; p	r <sub>s</sub> ; p
Physical functioning	-0.282; <.001	-0.289; <.001	-0.155; <.001	-0.264; <.001
Role limitations due to physical problems	-0.144; <.001	-0.116; <.001	-0.116; <.001	-0.147; <.001
Bodily pain	-0.308; <.001	-0.311; <.001	-0.178; <.001	-0.286; <.001
General health perception	-0.140; <.001	-0.117; <.001	-0.095; <.001	-0.115; <.001
Vitality	-0.163; <.001	-0.180; <.001	-0.088; <.001	-0.174; <.001
Social functioning	-0.094; <.001	-0.085; <.001	-0.083; <.001	-0.088; <.001
Role limitations due to emotional problems	-0.156; <.001	-0.148; <.001	-0.115; <.001	-0.133; <.001
Mental health	-0.017; 0.480	-0.017; 0.476	-0.097; <.001	-0.029; 0.219

The severity of chronic pelvic pain was evaluated according to the McGill Pain Scale in the present study. Severity scores from the scale ranged between 14 and 25, with a mean score of  $20.74\pm2.95$ . This result shows that women identify mild level pain. "Physical

functioning, role limitations due to physical problems and role limitations due to emotional problems" domains of SF-36 were not correlated with the severity of chronic pelvic pain (p>0.05 for each). There was a significant negative, weak correlation between "bodly pain, general health perception, social functioning and mental health" domains of SF-36 and with the severity of chronic pelvic pain. The results of the correlation analysis between the severity of chronic pelvic pain and scores from SF-36 are presented in Table 4.

## Table 4

Results of the correlation	analysis between t	the CPP and scores from SF-36
----------------------------	--------------------	-------------------------------

SF-36 Domains	Pelvic pain severity	
	r <sub>s</sub> ; p	
Physical functioning	-0.025; 0.719	
Role limitations due to physical problems	-0.106; 0.120	
Bodily pain	-0.399; <.001	
General health perception	-0.260; <.001	
Vitality	-0.154; 0.023	
Social functioning	-0.142; 0.037	
Role limitations due to emotional problems	-0.053; 0.442	
Mental health	-0.193; 0.004	

### 4. Discussion

Prevalences of chronic pelvic pain ranging between 14.7 and 25.4% have been reported from studies performed in other countries (5,11-14). No studies performed in Turkey to determine the prevalence of chronic pelvic pain was identified. The prevalence of chronic pelvic pain was 12.2% in our study, which was lower than those reported from previous studies in the literature. This may be due to the fact that the studies involved different populations and used different research methodologies. In addition, the countries from which these incidences of chronic pelvic pain were reported have higher levels of income compared to Turkey and the proportion of employed women was higher, which may also explain the difference. Likewise, the prevalence of chronic pelvic pain was higher among the women with higher level of income and among employed women in our study (Table 1).

Previous studies have concluded that the distressing problem of chronic pelvic pain was common among women in mid-thirties, due to with the changes in hormonal mechanisms during the reproductive period, the more active sexual activity and increased menstrual cycle and fertility during these ages (5,12,14,32). Additionally, a study by Howard FM et al in the USA also reported that chronic

pelvic pain was more common among reproductive women aged 27-29 years. 33 Consistent with previous reports, the present study also demonstrated that the prevalence of CPP was 3.519 times higher among women aged 25-34 years (p<0.05) (Table 1).

Being employed and having higher levels of income could result in higher stress levels and higher levels could lower pain threshold which could result in failure to tolerate even mild pain. Therefore, being employed and having higher levels of income are expected to increase chronic pain. In our study, the prevalence of chronic pelvic pain was higher among women who were actively employed in an income-generating position (p<0.05). Furthermore, good familial income also represents a risk factor for chronic pelvic pain (p<0.05 for each) (Table 1).

Some studies in other counties of the world have demonstrated that smoking was associated with increased chronic pelvic pain (10,34). Our study demonstrated that smoking was not a risk factor for chronic pelvic pain (p>0.05) (Table 1).

Use of antidepressants for the treatment of chronic pelvic pain has been described in the literature (35-36). Thus, an increased incidence of chronic pelvic pain would not be

expected with antidepressant use. Consistently, our study demonstrated that previous treatment with antidepressants was not associated with an increased incidence of chronic pelvic pain (p>0.05) (Table 1).

Pelvic inflammatory disease (PID) and ovarian cyst are the most common pathologies noted with laparoscopic procedures in women with chronic pelvic pain (33,37). According to the results of our study, PID is an important risk factor for chronic pelvic pain and chronic pelvic pain was 2.492 times more common among women with history of ovarian cyst (p<0.05) (Table 1).

In a study by Reiter and Gambone, curettage history was not associated with an increased incidence of chronic pelvic pain, whereas chronic pelvic pain was common among subjects with abortion history (38). Likewise, in a study by Latthe et al, abortion history was associated with a higher incidence of chronic pelvic pain. 10 Similarly, women with history of abortion had a higher prevalence of chronic pelvic pain in our study (p<0.05) (Table 1).

Previous studies have reported that early menarche was a risk factor for chronic pelvic pain (10,34,39). In our study, ages at menarche of 12 and below was a risk factor for chronic pelvic pain (p<0.05).Our study demonstrated that dysmenorrhoea was one of the most important risk factors for chronic pelvic pain (p<0.05) (Table 1). Likewise, several studies from other countries of the world reported an increased prevalence of chronic pelvic pain in the presence of dysmenorrhoea (5,10,14,37).

Chronic pelvic pain is a common problem with adverse effects on women's quality of life resulting in physical, psychological and social problems. It is apparent from previous studies that many women are adversely affected in their normal daily life activities due to the burden of pain, and that their quality of life deteriorates to a significant extent (37,40). Quality of life of women with chronic pelvic pain was significantly poorer in all domains (p<0.05 for each) other than the mental health domain (p>0.05) of the SF-36 questionnaire (p<0.05 for each) (Table 2). These results are consistent with the literature and demonstrate a negative impact of chronic pelvic pain on quality of life.

According to the findings of our study, mean quality of life scores in all domains but "Mental health" of the SF-36 questionnaire are expected to be lower due to chronic pelvic pain with increased mean scores from the domains of the McGill Pain Scale, which describe different aspects of pain. Likewise, higher scores from the "evaluative" domain of the McGill Pain Scale in the study group was associated with impaired health-related quality of life (p<0.05). Quality of life as measured by the scores from each domain except "mental health" of SF-36 was adversely affected by higher scores from McGill Pain Scale domains (p<0.05 for each). The scores of the women from the "sensory, affective and miscellaneous" domains of the McGill Pain Scale was not significantly correlated with the "mental health" domain of the SF-36 questionnaire (p>0.05 for each)(Table 3).

Severe chronic pain is expected to result in lower mean scores from the SF-36 quality of life questionnaire. In our study, no relationships were identified between the "physical functioning, role-physical and roleemotional" domains of SF-36 and CPP severity (p>0.05 for each domain). On the other hand, increased severity of chronic pelvic pain was associated with poorer quality of life in "bodily pain, general health perception, vitality, social functioning and mental health" domains of SF-36 (p<0.05 for each domain) (Table 4).

## Limitations

It was not possible to demonstrate causality due to the cross-sectional design of the study. The facts that the study group included only women, was conducted with women 15-49 years of age and in the service area of only one local healthcare centre were other limitations of the study.

## 5. Conclusion

Chronic pelvic pain is an important problem among the women residing in area where the study was conducted. Women with chronic pain had poorer quality of life. Studies to raise the awareness regarding the need to find a solution to the problem as well as further medical and social studies will be helpful.

#### Footnotes

Presented at the 12th National Pain Congress 27th annual meeting of the Society for

#### REFERENCES

- 1. Kennedy, S. and Moore, H. (2005). The initial management of chronic pelvic pain. Green top guidelines. *London: Royal College of Obstetricians and Gynaecologists.*
- 2. Bordman, R. and Jackson, B. (2006). Below the belt: approach to chronic pelvic pain. *Canadian family physician*, 52(12), 1556-1562.
- Gelbaya, T. A., and El-Halwagy, H. E. (2001). Focus on primary care: chronic pelvic pain in women. *Obstetrical and gynecological survey*, 56(12), 757-764.
- 4. Ortiz, D. D. and Christus M.D. (2008). Chronic pelvic pain in women. *American family physician*, 77(11), 1535-1542.
- Grace, V. M. and Zondervan, K. T. (2004). Chronic pelvic pain in New Zealand: prevalence, pain severity, diagnoses and use of the health services. *Australian and New Zealand journal of public health*, 28(4), 369-375.
- Williams, R. E., Hartmann, K. E., Sandler, R. S., Miller, W. C., and Steege, J. F. (2004). Prevalence and characteristics of irritable bowel syndrome among women with chronic pelvic pain. *Obstetrics and Gynecology*, 104(3), 452-458.
- McGowan, L., Pitts, M., and Carter, D. C. (1999). Chronic pelvic pain: The general practitioner's perspective. *Psychology, health and medicine*, 4(3), 303-317.
- Tettambel, M. A. (2007). Using integrative therapies to treat women with chronic pelvic pain. *J Am Osteopath Assoc*, 107(10 Suppl 6), ES17-ES20.
- Vincent, K. (2009). Chronic pelvic pain in women. *Postgraduate medical journal*, 85(999), 24-29.
- Latthe, P., Mignini, L., Gray, R., Hills, R., and Khan, K. (2006). Factors predisposing women to chronic pelvic pain: systematic review. *Bmj*, 332(7544), 749-755.
- 11. Jamieson, D. J., and Steege, J. F. (1996). The prevalence of dysmenorrhea, dyspareunia, pelvic pain, and irritable bowel syndrome in primary care practices. *Obstetrics and Gynecology*, 87(1), 55-58.
- Mathias, S. D., Kuppermann, M., Liberman, R. F., Lipschutz, R. C., and Steege, J. F. (1996). Chronic pelvic pain: prevalence, health-related quality of life, and economic

correlates. *Obstetrics and Gynecology*, 87(3), 321-327.

- Zondervan, K. T., Yudkin, P. L., Vessey, M. P., Dawes, M. G., Barlow, D. H., and Kennedy, S. H. (1999). Prevalence and incidence of chronic pelvic pain in primary care: evidence from a national general practice database. *BJOG: An International Journal of Obstetrics and Gynaecology*, 106(11), 1149-1155.
- Zondervan, K. T., Yudkin, P. L., Vessey, M. P., Jenkinson, C. P., Dawes, M. G., Barlow, D. H., and Kennedy, S. H. (2001). The community prevalence of chronic pelvic pain in women and associated illness behaviour. *British Journal of General Practice*, 51(468), 541-547.
- Weijenborg, P. T., Ter Kuile, M. M., and Stones, W. (2009). A cognitive behavioural based assessment of women with chronic pelvic pain. *Journal of Psychosomatic Obstetrics and Gynecology*, 30(4), 262-268.
- 16. World Health Organization. (2002). *The world health report 2002: reducing risks, promoting healthy life.* World Health Organization.
- 17. Duffy, S. (2001). Chronic pelvic pain: defining the scope of the problem. *International Journal of Gynecology and Obstetrics*, 74, S3-S7.
- Schlesinger, L. (1996). Chronic pain, intimacy, and sexuality: A qualitative study of women who live with pain. *Journal of Sex Research*, 33(3), 249-256.
- Collett, B. J., Cordle, C., and Stewart, C. (2000). Setting up a multidisciplinary clinic. *Best Practice and Research Clinical Obstetrics and Gynaecology*, 14(3), 541-556.
- 20. Eti, A. F., and Badir, A. (2005). Reality about pain control: the knowledge and beliefs of nurses on the nature, assessment and management of pain. Agri-*The journal of the Turkish Society of Algology*, *17*(2), 44-51.
- Fall, M., Baranowski, A.P., Elneil, S., Engeler, D., Hughes, J., Messelink, E.J., Oberpenning, F., Wiiliams, A.C. (2010). EAU guidelines on chronic pelvic pain. Eur Urol, 5:35–48.
- 22. International Association for the Study of Pain. Pain, IASP Pain Terminology. 1994. <u>http://www.iasppain.org/</u> <u>AM/Template.cfm?Section=Pain\_Definitionsa</u>

Maternal-Fetal Medicine, May 17th – 129th, 2012, Istanbul, Turkey

ndTemplate=/CM/HTMLDisplay. cfmandContentID=1728#Pain. (10.03.2010)

- 23. International Pelvic Pain Society. Chronic Pelvic Pain: A Patient Education Booklet. http://www.pelvicpain.org/pdf/Patients/CPP\_P t\_Ed\_Booklet.pd (10.03.2010).
- 24. Melzack, R. (1975). The McGill Pain Questionnaire: major properties and scoring methods. *Pain*, *1*(3), 277-299.
- Kuguoglu, S., Eti-Aslan, F., and Olgun, N. (2003). McGill Melzack Agrı Soru Formu (MASF) nun Türkçe'ye uyarlanması [Turkish adaptation of the McGill Melzack Pain Questionnaire (MPQ)]. Agrı, 15(1), 47-52.
- Kocyigit, H., Aydemir, O., Fisek, G., Olmez, N., and Memis, A. (1999). Validity and reliability of Turkish version of Short form 36: A study of a patients with romatoid disorder. *Journal of Drug and Therapy (in Turkish)*, 12, 102-106.
- Ware Jr, J. E., and Sherbourne, C. D. (1992). The MOS 36-item short-form health survey (SF-36): I. Conceptual framework and item selection. *Medical care*, 473-483.
- 28. Tolonen, H., Hermann, W., Jakovljevic, D., and Kuulasma, K. European Haelth Risk Monitoring (EHRM) Project. Review of surveys for risk factors of major chronic diseases and comparability of the results. Finnish National Public Health Institute 2002.
- 29. Roberts, R. E., Kaplan, G. A., Shema, S. J., and Strawbridge, W. J. (1997). Prevalence and correlates of depression in an aging cohort: the Alameda County Study. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 52(5), S252-S258.
- Heim, L. J. (2001). Evaluation and differential diagnosis of dyspareunia. *American Family Physician*, 63(8), 1535-1556.
- Patel, V., Tanksale, V., Sahasrabhojanee, M., Gupte, S., and Nevrekar, P. (2006). The burden and determinants of dysmenorrhoea: a population-based survey of 2262 women in Goa, India. *BJOG: An International Journal* of Obstetrics and Gynaecology, 113(4), 453-463.

- 32. Laszlo, K. D., Gyorffy, Z., Adam, S., Csoboth, C., and Kopp, M. S. (2008). Workrelated stress factors and menstrual pain: a nation-wide representative survey. *Journal of Psychosomatic Obstetrics and Gynecology*, 29(2), 133-138.
- 33. Howard, F. M. (2003). The role of laparoscopy in the chronic pelvic pain patient. *Clinical obstetrics and gynecology*, *46*(4), 749-766.
- 34. Măgurean, O., Lucan, M., and Iacob, G. (2012). Risk Factors and Pain Characteristics Assessment in Women with Urologic Disease related Chronic Pelvic Pain. *Applied Medical Informatics*, 30(1), 41-48.
- 35. Jarrell, J. F., Vilos, G. A., Allaire, C., Burgess, S., Fortin, C., Gerwin, R., ... and Shenassa, H. (2005). Consensus guidelines for the management of chronic pelvic pain. *Journal of* obstetrics and gynaecology Canada: JOGC= Journal d'obstetrique et gynecologie du Canada: JOGC, 27(8), 781-826.
- Walker, E. A., Sullivan, M. D., and Stenchever, M. A. (1993). Use of antidepressants in the management of women with chronic pelvic pain. *Obstetrics and gynecology clinics of North America*, 20(4), 743-751.
- 37. Zondervan, K. T., Yudkin, P. L., Vessey, M. P., Jenkinson, C. P., Dawes, M. G., Barlow, D. H., and Kennedy, S. H. (2001). Chronic pelvic pain in the community—symptoms, investigations, and diagnoses. *American journal of obstetrics and gynecology*, 184(6), 1149-1155.
- Reiter, R. C. and Gambone, J. C. (1990). Demographic and historic variables in women with idiopathic chronic pelvic pain. *Obstetrics* and Gynecology, 75(3), 428-432.
- Goldstein, D. P., Leventhal, J. M., and Emans, S. J. (1979). New insights into the old problem of chronic pelvic pain. *Journal of pediatric surgery*, 14(6), 675-680.
- 40. Grace, V. and Zondervan, K. (2006). Chronic pelvic pain in women in New Zealand: comparative well-being, comorbidity, and impact on work and other activities. *Health care for women international*, 27(7), 585-599.