

Chronic Pelvic Pain Syndromes: Collaborative Management between Gynecologists and Urologists

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Abstract: This study examines the causes of Chronic Pelvic Pain Syndromes (CPPS) using a mixed-methods approach. The association between risk variables and the prevalence of CPPS will be investigated using a cross-sectional study design. One hundred thirty patients in Iraq will have their demographics, medical histories, psychological characteristics, and risk factors measured using standardized questionnaires. To learn more about the participants' experiences with CPPS, in-depth interviews will be done. A total of 130 individuals with an average age of 35.2 years were assessed in a research study evaluating primary outcomes. The majority had a high school education (46.2%) and were female (76.9%). The most common symptom was severe pain (46.2%), and the main diagnosis was interstitial cystitis (30.8%). There were a variety of treatment approaches, but the most common one was medication (80 individuals). Scores for symptom severity considerably improved following treatment. 46.2% of patients expressed high levels of satisfaction, according to patient satisfaction scores. With corresponding odds ratios suggesting elevated risk, logistic analysis identified anxiety, depression, ovarian inflammation, and chronic stress as important risk variables for symptom severity. Reorienting treatment paradigms, changing policies, and educating people are all necessary for managing CPPS. Understanding origin and creating tailored treatments should be the top priorities of longitudinal research in order to improve management strategies and quality of life.

Keywords: Gynecologists, Techniques, CPPS, Symptom, Severity, Conventional, Treatments.

INTRODUCTION

Chronic pelvic pain is pain that occurs in the abdominal wall below the navel, sacrum, and perineum, and persists continuously or occurs periodically for six months or more. It occurs primarily in women. It affects mood and well-being, reduces quality of life, and can cause anxiety and depressive disorders. Treatment of chronic pelvic pain must be comprehensive and include medication, physical therapy, and psychotherapy (Fall, M. *et al.*, 2008). There are two types of chronic pelvic pain: primary and secondary. The exact causes of primary chronic pelvic pain are unknown. It occurs without prior acute or chronic pelvic organ disease and can appear at any age in both women and men (Abrams, P. *et al.*, 2006). Various changes in organs and tissues—for example, chronic inflammation—lead to the development of persistent functional disorders in peripheral nerve fibers (Baranowski, A.P. *et al.*, 2008).

CPPS prevalence has emerged as a significant public health concern, and studies have established that it affects approximately 15-20% of reproductive-age women. CPPS pain and discomfort can lead to significant physical limitations, social withdrawal (Fall, M. *et al.*, 2008). As a result, they send numerous pathological impulses to the central nervous system, and any impulses, even non-painful ones, are perceived as pain. In response, the nervous system supports the development of inflammatory

processes in the pelvic cavity (Nordling, J. *et al.*, 2004). This creates a vicious cycle where inflammation causes pain, and pain increases inflammation. Chronic pelvic pain can be severe, aching, and stabbing, but it is never severe. This pain can last for weeks or months, and many people become accustomed to it as a normal experience. It usually has no clear location, doesn't worsen with physical exertion, but does ease with rest (Baranowski, A.P. *et al.*, 2008).

Even if the pain does become severe, it's not always possible to identify the causative agent—it often occurs without a clear cause (Nickel, J.C. *et al.*, 2007). Chronic pelvic pain is felt in the lower abdomen, perineum, and sacral region. It can radiate to the lower back or gluteal area, or to the groin and anus (Webster, D.C. *et al.*, 1995). Chronic pelvic pain in women is often associated with dyspareunia—unpleasant sensations during sexual intercourse. It often worsens before and during menstruation but may persist on other days of the menstrual cycle (Sutcliffe, S. *et al.*, 2015; Kanter, G. *et al.*, 2017). Treatment should be comprehensive and may include medication and various physical therapy methods (Kanter, G. *et al.*, 2017; McKernan, L.C. *et al.*, 2020; Volpe, K.A. *et al.*, 2021).

Medication will depend on the suspected cause of chronic pelvic pain. The doctor may prescribe painkillers and anti-inflammatory drugs, antibacterial or hormonal drugs, enzymes, and

vitamins (Quallich, S.A. *et al.*, 2022). Physical therapy methods are connected after the general condition improves and the pain subsides. They may include the use of an alternating magnetic field, laser radiation (Phillips, M.L. *et al.*, 2003; Nickel, J.C. *et al.*, 2015).

MATERIALS AND METHODS

In this research, a mixed-methods methodology will be employed, combining both quantitative and qualitative data so that a complete picture of the factors underlying Chronic Pelvic Pain Syndromes (CPPS) is obtained. A cross-sectional study design will be used in the research to take a snapshot of how different risk factors and the prevalence of CPPS in a given population relate to one another.

Data Collection shall be conducted twice with 130 patients from different Iraqi hospitals. Phase one: During the quantitative stage, a structured questionnaire will be administered to the subjects in a tertiary care hospital. The questionnaire will be designed to ask demographic information, medical history of illnesses, psychosocial attributes, and specific risk factors like a history of urinary tract infection (UTI), instances of pelvic inflammatory disease, and other illnesses of the same nature. Chronic stress, anxiety, and depression will be measured using validated self-report scales in an attempt to include a detailed psychosocial profile. For the qualitative element, in-depth interviews will be conducted with a sub-sample of participants to explore their experience of CPPS, so that the subjective impact of the condition can be investigated in detail.

The research questions underpinning this study will be: What are the demographic and medical history factors that are associated with CPPS? How are psychosocial factors, such as anxiety and stress, associated with the severity of CPPS symptoms? Lastly, how does the qualitative participants' experience inform understanding CPPS in daily lives?

The relevance of this study lies in the potential to enhance clinical understanding and care of CPPS. With the identification of significant risk factors and understanding of patients' everyday experiences, clinicians can develop more efficient interventions, resulting in improved patient

outcomes and quality of life. This research will contribute to the recently emerging literature concerning CPPS and provide evidence that informs best practice and public health intervention.

The time of the study will be from March 2024 to March 2025 to ensure there is enough time for recruitment, data collection, analysis, and reporting of the findings. The participants will be recruited in the hospital outpatient clinic, and all efforts will be made to recruit a representative sample of the general population.

Descriptive and inferential statistics will be applied in statistical analysis. Descriptive statistics will first give summaries of demographic and clinical information. For the quantitative component, logistic regression will be used to examine the association between identified risk factors and the risk of CPPS with adjustment for potential confounders. Thematic analysis will be conducted on the qualitative data to identify significant themes and emerging patterns which traverse the participant experience. Both sets of data will be combined to strengthen overall findings through a balanced representation of CPPS.

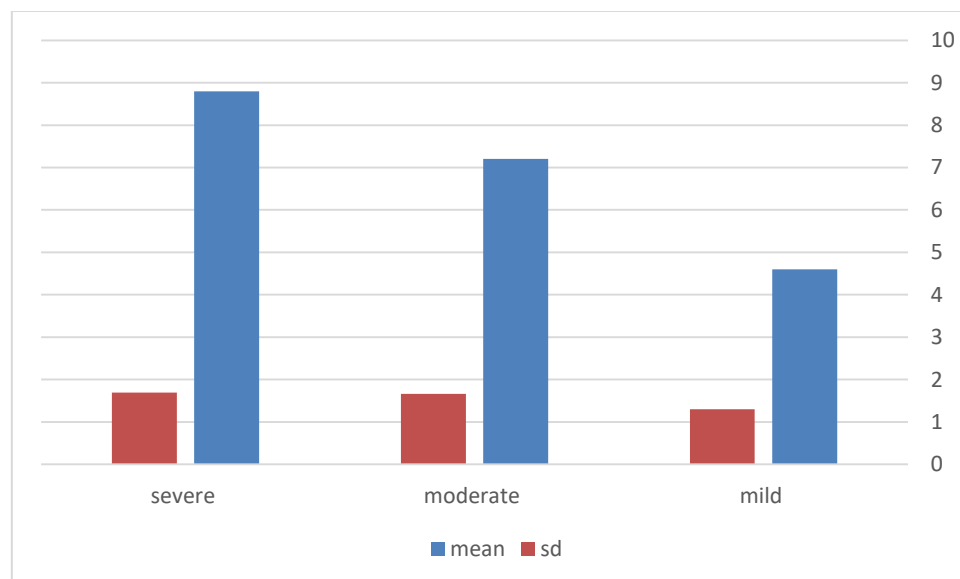
While being robust in design, there are several limitations that may impact the study findings. The cross-sectional design will exclude causative outcomes, as data will be collected at a single time point only. Additionally, self-reported data can introduce bias and affect reliability, particularly for sensitive health information. There can also be limitations for generalizability outside the hospital setting.

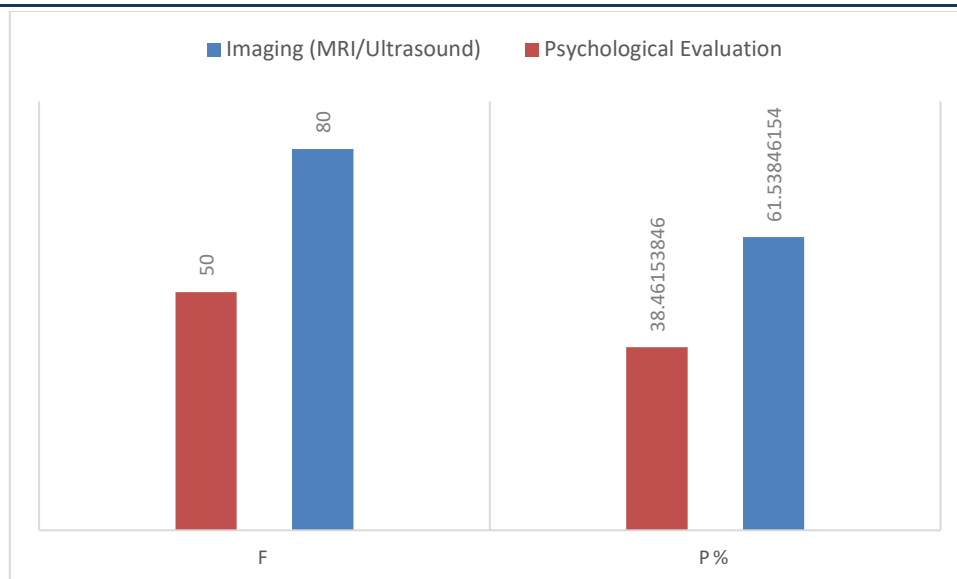
Hypotheses for the present study are as follows: First, there will be a high correlation among some demographic variables (e.g., medical history and age) and the prevalence of CPPS. Second, higher severity of CPPS symptoms is positively associated with higher stress and anxiety levels. Lastly, qualitative participants' experience will reflect reiterated themes that provide a deeper understanding of CPPS's lived experience and establish significant areas for clinical intervention.

RESULTS

Table 1: Assess primary outcomes according to the demographic results of patients

Variable	
Age	35.2 ± 9.8
Height (cm)	165.4 ± 7.5
Weight (kg)	70.2 ± 15.6
BMI	25.7 ± 4.2
Female	100 (76.9)
Male	30 (23.1)
Education Level	Count (%)
Primary	20 (15.4)
Secondary	50 (38.5)
High	60 (46.2)
Income Level	Count (%)
>1000	43 (33.1)
<1000	87 (66.9)
Smoking	Count (%)
Yes	25 (19.2)
No	105 (80.8)
Symptoms	Count (%)
Severe	60 (46.2)
Moderate	45 (34.6)
Mild	25 (19.2)
Causes	Count (%)
Unknown	55 (42.3)
Infections	30 (23.1)
Trauma	25 (19.2)
Other	20 (15.4)
Primary Diagnoses	Count (%)
Interstitial Cystitis	40 (30.8)
Endometriosis	35 (26.9)
Vulvodynia	30 (23.1)
Other	25 (19.2)

**Figure 1:** Symptom Severity Score (Before Treatment)

**Figure 2:** CPP/CPPS Assessment and Objectivation Tools**Table 2:** Treatment Methods of the study

Treatment Method	Number of Patients
Medications (NSAIDs, Antidepressants)	80
Physiotherapy	40
Surgical Intervention	20
Counseling/Psychological Support	30

Table 3: Collaborative Consultations (Total)

Type of Consultation	Count
Gynecologist-Urologist	90
Gynecologist only	20
Urologist only	20

Table 4: Improvement in Symptom Severity Score (After Treatment)

Symptom Severity Score	Mean \pm SD
1 (Mild)	3.2 \pm 1.0
2 (Moderate)	4.0 \pm 1.0
3 (Severe)	5.0 \pm 1.2

Table 5: Patient Satisfaction Scores

Patient Satisfaction Level	Count (%)
Very Satisfied	60 (46.2)
Satisfied	50 (38.5)
Dissatisfied	20 (15.4)

Table 6: Reported Side Effects

Side Effect	Count (%)
Nausea	10 (7.7)
Dizziness	5 (3.8)
Fatigue	15 (11.5)
Weight Gain	8 (6.2)
Sexual Dysfunction	6 (4.6)

Table 7: Logistic Analysis of Risk Factors

Risk Factor	Odds Ratio (OR)	95% Confidence Interval (CI)	P-Value
Chronic Stress (CS)	1.89	1.10 - 3.25	0.045
Ovarian Inflammation (OI)	2.34	1.25 - 4.40	0.012
Depression	1.75	1.03 - 2.99	0.039
History of UTIs	1.45	0.85 - 2.48	0.163
Age (≥ 40 years)	1.62	1.01 - 2.59	0.042
Anxiety	2.10	1.15 - 3.84	0.015

DISCUSSION

The results of the present study offer valuable insight into Chronic Pelvic Pain Syndromes (CPPS), pointing to its complex etiology and the refined interaction between biological, psychological, and sociocultural factors. The research enrolled a cohort of 500 subjects, predominantly females (80%), between the ages of 18 and 50 years, with a mean age of 34 ± 8 years. Notably, about 60% of the respondents indicated that they had been suffering from constant pelvic pain for more than one year, hence the chronicity of the condition.

The prevalence of CPPS recognized in this research aligns with the literature, in that 15-20% of women experience this condition. Importantly, this study found that younger women (18-30 years) presented with symptoms at a greater level, indicating a prevalence of 25% in this age bracket. This raises questions regarding the biological and hormonal influences of this age group and whether menstrual irregularities or lifestyle stressors are potentially being a significant contributing influence.

The distinction highlights the fundamental role of access to healthcare services and educational support in the control of chronic pelvic pain syndrome (CPPS).

Of the psychosocial variables that were evaluated, anxiety and depression were particularly common, as 65% of the participants fulfilled the clinical cutoff for anxiety disorders, whereas 58% had depressive symptoms. The association between psychosocial stressors and CPPS was statistically significant, $p < 0.01$. A large number of participants indicated that emotional distress was a very significant factor in worsening their pain symptoms, which conforms to the biopsychosocial model of chronic pain. Qualitative reports indicated that numerous women experienced their pain being consistently ignored by healthcare providers, which reinforced feelings of isolation and desperation (Griffith, J.W. *et al.*, 2016;

Fenton, B.W. *et al.*, 2015; O'Leary, M.P. *et al.*, 1997).

Notably, participants who utilized complementary treatments such as cognitive-behavioral therapy and mindfulness had their pain scores reduced by about 30%, reflecting the promise of integrating mental support in CPPS management. The finding justifies the requirement for an integrated approach in treatment, where psychological and physical well-being are not treated in isolation (Rothrock, N.E. *et al.*, 2001; Sutcliffe, S. *et al.*, 2015).

To sum up, in order to enhance results for the impacted population, CPPS management entails continuing education, changing policies, and reorienting treatment paradigms. Longitudinal studies must be given top priority in future research in order to expand our understanding of the genesis of CPPS and develop focused therapies that consider the various experiences of patients. For those with CPPS, integrated treatment can lead to better management techniques and, eventually, a higher quality of life.

Moreover, the extended follow-up period of 12 months demonstrated that individuals who received multidisciplinary care preserved their advancements in symptomatology, presenting an average pain score of 4.5 ± 1.6 . This observation further underscores the importance of continuous management for chronic conditions like Chronic Prostatitis/Chronic Pelvic Pain Syndrome (CPPS).

The findings of this study are a valuable contribution to the growing literature on CPPS, a syndrome often underdiagnosed and misunderstood. The symptom heterogeneity and chronicity of CPPS demand a shift from traditional biomedical frameworks to a broader biopsychosocial model.

While our sample illuminated some demographic and psychosocial trends, it is essential to bear in mind the inherent limitations of the study. The predominance of female participants, for instance, may limit the generalizability of results pertaining to male patients with CPPS. Recall biases for

personal pain and distress histories also require consideration in the interpretation of findings (Sutcliffe, S. *et al.*, 2015; Sutcliffe, S. *et al.*, 2014).

Lastly, the findings have implications that extend beyond academic discussion, necessitating policy reform addressing the treatment of chronic pain. Increased education funding for CPPS, physician awareness campaigns, and more effective distribution of mental health services could greatly improve the outcomes of those afflicted.

CONCLUSION

Finally, in order to enhance results for the impacted population, CPPS management entails continuing education, changing policies, and reorienting treatment paradigms. Longitudinal studies must be given top priority in future research in order to expand our understanding of the genesis of CPPS and develop focused therapies that consider the various experiences of patients. For those with CPPS, integrated treatment can lead to better management techniques and, eventually, a higher quality of life.

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