

Effect of Coping Strategy Intervention for Patients Diagnosed with Chronic Prostatitis

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Abstract:

Background Chronic prostatitis is a common urological diagnosis in men of all ages in Egypt. Chronic prostatitis causes many men significant morbidity, coping strategy play important role to deal the patients diagnosed with chronic prostatitis and to cope with their case. Aim: the study aims to evaluate the effect of coping strategy intervention for patients diagnosed with chronic prostatitis **Research design:** A quasi-experimental design was used in this study. **Setting:** This study was conducted at the Urology Outpatient Clinic in Ain Shams University Hospitals. **Sample:** A purposive sample was used to select 60 of patients diagnosed with chronic prostatitis. **Tools:** the researchers used two tools I) An interviewing questioner which consists of three parts, I) patients socio-demographic data, II) Assess patient's present medical history, and III) patients' knowledge regarding chronic prostatitis, II) Brief cope scale; standardized tool used for evaluating coping strategy among chronic prostatitis patients, **Results:** this study showed, highly statistically significant improvement of patients diagnosed with chronic prostatitis knowledge and coping strategy post coping strategy intervention than pre, (4.166±2.262 and 57.533 ± 15.053) , (11.633±2.532 and 66.667 ± 6.357) respectively post coping strategy intervention implementation. **Conclusion:** coping strategy intervention implementation aid the patients diagnosed with chronic prostatitis to cope with chronic disease, also their knowledge regarding chronic prostatitis improved, **Recommendations:** Providing booklet to patients diagnosed with chronic prostatitis to describe the natural of disease and how to cope with this type of chronic disease; design and hinting poster about coping strategy Intervention regarding prostatitis in Urology outpatient clinic; and further researchers are needed in other setting and implement coping strategy intervention for patients diagnosed with chronic prostatitis.

Key words: Chronic prostatitis, diagnosed patients and coping Strategy intervention.

Introduction

The prostate is a gland located at the base of the bladder, surrounding part of the urethra (the tube that carries urine from the bladder) in men. The prostate also functions in reproduction by producing part of the seminal fluid, which helps to transport sperm. Prostatitis is a common problem, affecting up to 25% of

all men.3

Chronic prostatitis is a common disease in men, and the incidence is gradually increasing. In 1999, the National Institutes of Health (NIH) classified prostatitis into the following four categories: I- acute bacterial prostatitis; II- chronic bacterial prostatitis; III- chronic prostatitis/chronic pelvic pain

syndrome (CP/CPPS); and IV- asymptomatic inflammatory prostatitis (Shen et al., 2018)

Chronic prostatitis is a common urological diagnosis in men of all ages. Category III CP/ CPPS is the most complex type and accounts for 90–95% of prostatitis diagnoses, which causes many men significant morbidity and has a detrimental effect on their life. The main four symptom domains of CBP and CP/CPPS are urogenital pain, lower urinary tract symptoms (LUTS), psychological issues and sexual dysfunction (Shang et al., 2016)

Prostatitis is one of the most common diseases seen in urology practices in the United States, accounting for nearly 2 million outpatient visits per year. The diagnosis is made in approximately 25% of male patients presenting with genitourinary symptoms. Autopsy studies have revealed a histologic prevalence of prostatitis of 64–86%. Approximately 8. 2% of men have prostatitis at some point in their lives (Paul et al., 2019).

Chronic prostatitis is the most frequent and debilitating prostate related complaint in men, affecting between 4 and 16% of men during their lifetime and it has a significant impact on a variety of life areas, such as occupation, social and recreational activities, family and home responsibilities, and sexual functioning. Persistent and recurrent pelvic pain can significantly reduce daily level activity than normal, causing disturbed sleep, fatigue, withdrawal, social isolation, shame, anger and depression, and, in some cases, suicidal feelings (Hao et al., 2018).

Chronic prostatitis patients complain from continuous pain symptoms or discomfort in perineal, suprapubic,

scrotal, testicular, penile, lower back, abdominal, inguinal or rectal regions, dysuria, or pain during or after ejaculation. Findings from a retrospective analysis of clinical records indicate that the most prevalent localization for pain is the perineal region (63% of patients), followed by the testicular, pubic and penile, patients with CP/CPPS reported tenderness in the abdominal/pelvic region with the most common sites including the prostate and pelvic floor muscles (Rees et al., 2018).

Living with chronic prostatitis requires the ability to adapt to living with the stressors of unremitting symptoms, such as pain, fatigue, depression and anxiety, while recovery is the desired outcome of illness, for those with chronic prostatitis, the more attainable outcome may be that of maintained psychological and physiological well-being in the face of these chronic prostatitis patients' demands on fitness, a process of “stability through change”. The use of effective coping strategies, mechanisms by which a person responds to and manages stress, is essential to achieving this adaptive dynamic, also coping strategy. Intervention helps individuals change the self and develop a more satisfying situation, learn new skills and become independent (Han et al., 2018).

Psychological adaptation is concerned with the efforts to control the emotions aroused by problems such as consciously postponing, paying attention to an impulse, trying not to be bothered by conflicting feelings, maintaining a sense of pride and tolerating ambiguity by withholding immediate action. There may be variability among individuals due to psychological responses against stressful events, social integration, and available resources for coping. Psychological responses protect individuals against the pressure; Adaptation brings behavioral

changes that reduce situational threats to manage the severity of the situation. Cognitive-behavioral approaches appear to prevent the development of chronic disability due to pain described coping in terms of inner feelings and actions like strategies, tactics, responses, cognitions, or behavior (McNaughton et al., 2017).

Physical coping may vary with the changes in time, age, style, personality, adaptive capacities, gender, and available resources along with the type of chronic illness. Most of the work on coping with chronic illness emphasized one dimension or aspect corresponding to the psychological coping that was associated with stress (Moldwin, 2017).

Fewer links between physical, psychological, and behavioral coping strategies during chronic illness, the cultural differences, living styles and standards of common man, and available resources varied in the eastern societies where poverty, low literacy level, and scarce available resources are the prominent features. There is a need to identify the role and strength of coping strategies during chronic prostatitis (Davis et al., 2018).

The nurse has important role toward patients complain from chronic prostatitis through apply three levels of prevention, primary level, secondary and tertiary levels of prevention and the nurse should provide appropriate physical and psychological health education and emotional support that the patients understand their condition and manage the often disruptive symptoms. Showing empathy, supporting patients with treatment, encouraging them with lifestyle changes and identifying useful complementary therapies will all help to give hope and help patients to gain control of, and better cope with, their condition (Lynch, 2017)

Significance of the study:

Chronic prostatitis accounts for 90% of prostatitis cases in outpatient clinic in United States and it is characterized by chronic pelvic pain symptoms lasting at least 3 months during the previous 6 months, in the absence of a urinary tract bacterial infection but in the presence of urinary symptoms and sexual dysfunction. Over the past 20 years the incidence of prostatitis in Egypt increased about twice (Sadek & Adly, 2018).

Chronic prostatitis has a significant impact on a variety of life areas, such as occupation, social and recreational activities, family and home responsibilities, and sexual functioning. Persistent and recurrent pelvic pain can significantly reduce daily level of activity, causing disturbed sleep, fatigue, withdrawal, social isolation, shame, anger and depression, and, in some cases, suicidal feelings (Tripp & Nickel, 2017).

The nurse must assist the patients diagnosed with chronic prostatitis by recognizing, managing the emotional and psychological dimensions of long-term conditions can be challenging both for patients and health professionals. The nurse need to improve patient knowledge regarding chronic prostatitis to aid the patient to cope with natural of pain combined with chronic prostatitis. Health education and support will help patients to understand their condition and manage the often disruptive symptoms. Showing empathy, supporting patients with treatment, how to cope and help the patients to gain control (Chen & Nickel, 2018).

Aim of the study

The study aimed to evaluate the effect of coping strategy intervention for

patients diagnosed with chronic prostatitis

Research hypothesis:

- Improvement Patients diagnosed with chronic prostatitis knowledge regarding chronic prostatitis.
- Improving of coping strategy among chronic prostatitis patients post intervention implementation.

Subjects and Method

Study Design: A Quasi-experimental study was used in this study

Setting:

This study was conducted at the Urology Outpatient Clinic in Ain Shams University Hospitals

Subject:

A purposive sample was used to select a total number of patients diagnosed with chronic prostatitis that constituted 60 patients, they attended from January 2018 – Jun 2018, according to the following criteria: patients diagnosed with chronic prostatitis, coming to Urology Outpatient Clinic for treatment and follow up; also the subjects agree to participate in this study.

Tools of data collection:

The data was collected through using the following 2 tools:

Tool I: An Interview Questionnaire:

Data for this study were collected by using a questionnaire sheet which designed by the investigators after reviewing the current related literature, the questionnaire sheet was designed in Arabic form to avoid misunderstanding, it

consists of three parts:

✓ **Part I:** Patients 'Socio-demographic data, such as: Age, level of education, occupation, marital status, residence, income, number of children.

✓ **Part II: Assess** patients' present medical history, such as duration of the disease diagnosis, complain from chronic disease, regular follow up visit.

✓ **Part III:** Patients' knowledge, that composed (6questions), regarding chronic prostatitis as meaning of prostatic gland; function of prostatic gland; causes of chronic prostatic; methods treatment of chronic prostatitis; signs and symptoms, and complication. The likert scale:

- 0 = no answer, I don't know or incorrect answer

- 1 = correct incomplete

- 2 = correct and complete

Knowledge scoring system:

- Poor knowledge that represent less than 50% scored from (0:<6),
- Fair knowledge from 50% to less than 75% scored from (≥ 6 :<9), and
- Good knowledge which start from more than 75% scored from (≥ 9 :12).

Tool II: Brief cope scale; standardized tool used for evaluating coping strategy among chronic prostatitis patients (Carver et al., 1989) this tool used pre and post the coping strategy Intervention implementation, it includes 28 items, consist of the following: "I've been turning to work or other activities to take my mind off things; I've been concentrating my efforts on doing something about the situation I'm in; I've been saying to myself "this isn't real"; I've been using alcohol or other drugs to

myself feel better; I've been getting emotional support from others; I've been giving up trying to deal with it; I've been taking action to try to make the situation better; I've been refusing to believe that it has happened; I've been saying things to let my unpleasant feeling escape; I've been getting help and advice from other people; I've been using alcohol or other drugs to help me get through it; I've been trying to see it in a different light, to make it seem more positive; I've been criticizing myself; I've been trying to come up with a strategy about what to do; I've been getting comfort and understanding from someone; I've been giving up the attempt to cope; I've been looking for something good in what is happening; I've been making jokes about it; I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping; I've been accepting the reality of the fact that it has happened; I've been expressing my negative feelings; I've been trying to find comfort in my religion or spiritual beliefs; I've been trying to get advice or help from other people about what to do; I've been learning to live with it; I've been thinking hard about what steps to take; I've been blaming myself for things that happened; I've been praying or meditating; I've been making fun of the situation". The likert scale includes:

1= haven't been doing this at all

2= doing this a little bit

3= doing this a medium amount

4= doing this a lot

Scores are presented for the two overarching coping styles

1. Avoidant Coping, which is characterized by the subscales of denial,

substance use, venting, behavioral disengagement, self-distraction and self-blame. Avoidant coping is associated with poorer physical health among those with medical conditions. Compared to Approach coping, avoidant coping is shown to be a less effective at managing anxiety.

2. Approach coping is characterized by the subscales of active coping, positive reframing, planning, acceptance, seeking emotional support, and seeking informational support. Approach Coping is associated with more helpful responses to adversity, including adaptive practical adjustment, better physical health outcomes and more stable emotional responding.

Scores are also presented for each of the following subscales.

- Self-distraction, items 1 and 19 (Avoidant)

- Active coping, items 2 and 7 (Approach)

- Denial, items 3 and 8 (Avoidant)

- Substance use, items 4 and 11 (Avoidant)

- Emotional support, items 5 and 15 (Approach)

- Use of informational support, items 10 and 23 (Approach)

- Behavioral disengagement, items 6 and 16 (Avoidant)

- Venting, items 9 and 21 (Avoidant)

- Positive reframing, items 12 and 17 (Approach)

- Planning, items 14 and 25
(Approach)

-Humor, items 18 and 28 *

- Acceptance, items 20 and 24
(Approach)

- Religion, items 22 and 27 *

- Self-blame, items 13 and 26
(Avoidant)

*Humor and Religion are neither
Approach or Avoidance coping

Patients responses are documented
and classified according to coping styles

The score was presented in form
mean and standard deviation pre and post
intervention .

Validity:

Tools were tested for content
validity by Jury of 5 experts in the
Community Health Nursing field and
Urology Specialty to confirm the
consequence and comprehensiveness of
tools.

Reliability:

Reliability coefficients were
calculated for questionnaires of:

✓ Assess patients' knowledge
questionnaire, Cronbach's Alpha = 0.86.

✓ Coping strategy questionnaire,
Cronbach's Alpha =0.88

Pilot Study:

A pilot study was applied for 10 of
patients diagnosed with chronic
prostatitisto test time spent to fill the
questionnaire. According to pilot study no
modification was applied in the studied

tools, however the pilot study sample was
included from studied sample.

Ethical consideration:

The researchers explained the
purpose and benefits of this study to
patients diagnosed with chronic prostatitis,
and then obtained oral consent before
data collection applied, the privacy was
confirmed to study sample at all study
process. The researchers make sure that
all data was used only for research
purpose and the studied sample have
rights to refuse or withdraw at any time of
the study process

Field work:

Before conducting the study,
official permission from the faculty of
nursing Helwan university was produced
to the appropriate authorities in the
previous setting. Permission to conduct
the study at the selected setting was
obtained after clarifying the aim of the
study in addition to gaining their
cooperation and support during data
collection. A review of local and
international literature was utilizing
scientific published articles, web search,
and textbooks.

➤ The study was carried out from
the beginning of January 2018 until Jun
2018 for data collection and coping
strategy Intervention implementation.

➤ The time spent to fill the
questionnaire was 15 minutes. The
researchers visit the study settings two
days/week (Saturday and Thursday) from
9.00 am to 12.00 pm.

➤ Coping strategy Intervention
implementation including the following:

➤ Assessment Phase: At the
beginning of interview the researchers

greeted the patients then, introduced themselves to each one included in the study. The preliminary data concerning the patients' knowledge and their coping strategy regarding chronic prostatitis was gathered.

➤ Planning and implementation phase: the content was designed in simple Arabic language to improve patients' knowledge and improving the coping strategy with chronic prostatitis . The contents of coping strategy intervention included deliver knowledge regarding chronic prostatitis as meaning of prostatic gland; function of prostatic gland; causes of chronic prostatic inflammation; methods of chronic prostatitis treatment; signs and symptoms, and complication . in addition provide coping strategy for patients with chronic prostatitis to help them cope with their case through the following items: Self-Distraction, Active Coping, Denial, avoid Substance Use, importance of Emotional Support; use of instrumental support such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping; behavioral disengagement such as avoid giving up trying to deal with it; how to apply venting; positive reframing; planning; humor through making fun of the situation; acceptance; religion; and prevent self-blame.

➤ Two sessions were given to every group of patients (5-7) in each session. Every session consumed from 20-30 minutes to be finished. The implementation done in waiting room in outpatient clinic taking in to consideration using simple and clear posters and different teaching strategies were used according to patients level of understanding .The researchers were using laptop screen for data show. A brochure was distributed to all studied sample.

➤ Evaluation phase: Evaluating an effect of coping strategy for patients diagnosed with chronic prostatitis was done by using the same tools pre and one-month post-application of the coping strategy intervention through patients follow up in the out patient clinic.

Statistical analysis:

The collected data were organized, tabulated and statistically analyzed using SPSS software (Statistical Package for the Social Sciences, version 22, SPSS Inc. Chicago, IL, USA). For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, which describe a categorical set of data by frequency, percentage or proportion of each category, Qualitative variables were compared using chi-square test (χ^2). For comparison between means of two related groups (pre and post coping strategy intervention) of parametric data, paired t-test was used. For comparison between more than two means of parametric data,. Correlation between variables was evaluated using Pearson's correlation coefficient (r) for quantitative data. Significance was adopted at $p < 0.05$ for interpretation of results of tests of significance (Dawson et al., 2001).

Result

Table (1): cleared the patients Diagnosed with Chronic Prostatitis socio-demographic data. It was observed that 68.3% of them were aged 20-<40 years old, 43.3% Illiterate and 61.7% drivers.

Figure (1): showed 86.7% of patients Diagnosed with Chronic Prostatitis had insufficient income.

Figure (2): showed 87% of patients Diagnosed with Chronic Prostatitis live in urban area.

Table (2): illustrated the patients Diagnosed with Chronic Prostatitis Current medical data, it was observed that 75% of them had duration at less than one year, 76.7% of them decrease sexual activity, 81.6% had cardiac disease and 85% maintain regular follow up visit.

Table (3): cleared that highly statistically significant improvement in patients' correct knowledge regarding chronic prostatitis pre, and post of coping strategy Intervention.

Table (4): mentioned that highly statistically significant improvement in total score knowledge of patients

diagnosed chronic prostatitis post – intervention than pre – intervention, $P < 0.001$.

Table (5): this study result revealed that statistical significant improvement in total mean total coping strategy of studied sample post intervention compared to pre-intervention, $P < 0.001$

Table (6): showed highly statistical significant positive correlation between Total Mean Coping Strategy Intervention and Total Mean scores knowledge of the studied Sample pre and post-intervention, $P < 0.001$.

Table (1): Frequency Distribution of patients Diagnosed with Chronic Prostatitis Regarding Socio- Demographic Characteristics (N=60).

Socio- Demographic data	The studied sample (N=60)	
	No.	%
Age years:		
20-<40	41	68.3
≥40-<60	17	28.3
≥60 -	2	3.3
Mean ± SD	48.683± 5.5981	
Level of education:		
Illiterate	26	43.3
Read and write	17	28.3
Moderate education	15	25
High education	2	3.3
Occupation		
Employee	13	21.7
Worker	8	13.3
Technician	2	3.3
Drivers	37	61.7
Marital status:		
Single	3	5
Married	49	81.7
Divorced	6	10
Widow	2	3.3
Number of Children:		
1-3	4	6.7
4-6	53	88.3
7-11	3	5

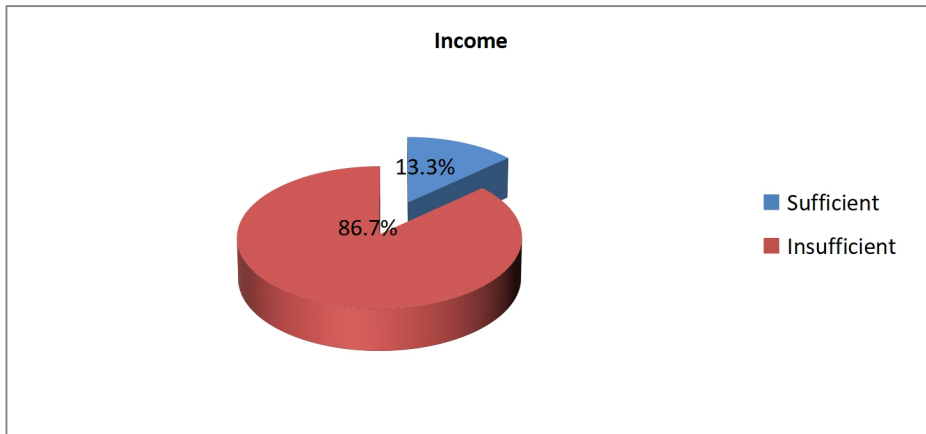


Figure (1): Distribution of Patients Diagnosed Chronic Prostatitis Income, (N=60).

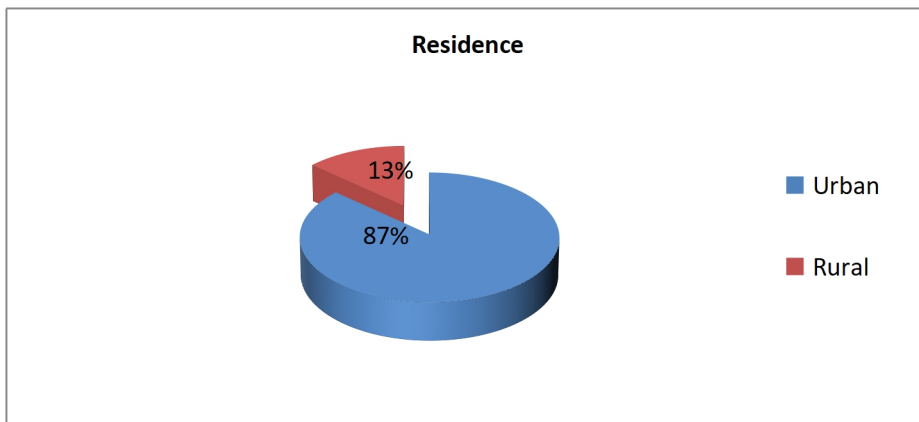


Figure (2): Distribution of Patients Diagnosed Chronic Prostatitis Residence, (N=60).

Table (2): Frequency Distribution of The Patients Diagnosed Chronic Prostatitis Regarding Current Medical Data (N=60).

Variables	The patients diagnosed chronic prostatitis (n=60)	
	No.	%
Duration of the disease diagnosis:		
< one year	45	75
≥ One year	15	25
Diagnostic symptoms of the disease:		
Dysuria	24	40
Pain in perineum	45	75
Increased urination frequency	32	53.3
Premature ejaculation	40	66.7
Pain in groin	24	40
Pain in anus	9	15
Pain in penis	11	18.3
Pain in testis	43	71.7
Pain in pubis	16	26.7
Inability to urinate	38	63.3
Hematospermia	26	43.3
Decrease sexual activity	46	76.7
Pain in lower back	36	60
Pain in abdomen	15	25
Fertility changes	28	47.7
Delay in ejaculation	20	33.3
Complain from chronic disease		
Diabetes mellitus	36	60
Hypertension	51	85
Cardiac disease	49	81.6
Multiple (Diabetes & hypertension)	17	28.3
Renal disease	44	73.3
Regular follow up visit	51	85

Table (3): Frequency Distribution of Patients' Correct Knowledge Regarding Chronic Prostatitis Pre, and Post (N=60).

Chronic prostatitis	Patients'Correct Knowledge Regarding Chronic Prostatitis, n = 60				χ^2	P-value
	Pre		Post			
	No.	%	No.	%		
- Meaning of prostatic gland	14	23.3	46	76.7	6.0064	0.000*
- Function of prostatic gland	19	31.7	41	68.3	8.0630	0.000*
- Causes of chronic prostatic inflammation	45	75	55	91.7	24.0740	0.209
- Treatment of chronic prostatitis	23	38.3	37	61.7	5.0304	0.000*
- Signs and symptoms of chronic prostatitis	13	21.7	47	78.3	7.0658	0.000*
- Complication of chronic prostatitis	19	31.7	41	68.3	8.0630	0.000*

*Significant (P<0.05)

Table (4): Total Scores Knowledge among The Patients Diagnosed Chronic Prostatitis Pre, and Post of Coping Strategy Intervention(N=60).

Total scores Knowledge	The patients diagnosed chronic prostatitis (n=60)				Test significance χ^2	of P value
	Pre No.	%	post No.	%		
- Poor level (< 50%) (0:<6)	59	98.3	-	-		
- Fair level ($\geq 50\%$:< 75%) (≥ 6 : < 9)	1	1.7	58	96.7		
- Good level ($\geq 75\%$: 100%) (≥ 9 : 12)	-	-	2	3.3	43.179	0.0001*
Range	(0-5)5		(7-12)5			
Mean \pm SD	4.166 \pm 2.262		11.633 \pm 2.532			

(*) Statistically significant at $p \leq 0.05$, : mean, SD: standard deviation 0

Table (5): Mean differences of patients ' Diagnosed with Chronic Prostatitis coping strategy scores pre and post-intervention (N=60)

Coping Strategy Items	Patients Diagnosed with Chronic Prostatitis, n=60		Paired T-test	P-value
	Mean \pm SD Pre	Post		
- Self-Distraction	2.0500 \pm 0.2197	3.0666 \pm 1.9386	4.0327	0.000*
- Active Coping	2.8666 \pm 0.8123	3.7333 \pm 1.9473	0.4480	0.000*
- Denial	6.4833 \pm 0.6507	6.550 \pm 0.5652	1.2713	0.209
- Substance	3.200 \pm 1.2870	6.2666 \pm 1.866	9.0360	0.000*
- Use of Emotional Support	2.4666 \pm 0.5030	3.3333 \pm 1.9886	4.0396	0.000*
- Use of Instrumental Support	3.0666 \pm 0.7997	6.9167 \pm 0.8885	26.691	0.000*
- Behavioral Disengagement	6.3666 \pm 0.7356	6.4833 \pm 0.7246	2.4265	0.018
- Venting	3.1666 \pm 0.9596	4.3333 \pm 2.0639	5.227	0.000*
- Positive Reframing	2.6166 \pm 0.9222	3.8333 \pm 2.2106	4.834	0.000*
- Planning	3.4500 \pm 1.4546	4.8166 \pm 1.9527	5.0630	0.000*
- Humor	4.1166 \pm 1.6782	4.4000 \pm 1.9502	3.068	0.003
- Acceptance	3.8000 \pm 1.0704	4.1500 \pm 1.6137	3.589	0.001
- Religion	5.3166 \pm 1.7610	5.8833 \pm 1.6270	3.3263	0.002
- Self-Blame	5.5000 \pm 1.0814	5.9666 \pm 1.0078	3.393	0.001
Total mean score of coping strategy	57.533 \pm 15.053	66.667 \pm 6.357	6.4844	0.000*

*Significant (P<0.05)

Table (6): Correlation between Studied Sample Total Mean Coping Strategy Intervention and Total Mean scores knowledge Pre, and Post Coping Strategy Intervention, (N= 60).

Variables	Total Mean scores knowledge of the studied Sample pre and post-intervention, n=60			
	pre		post	
	r	P	r	P
➤ Total Mean Coping Strategy Intervention				
pre	0.055	0.370		
post			0.492	0.000*

*Significant (P<0.05)r= Pearson Correlation Coefficient

Discussion

Prostatitis is swelling and inflammation of the prostate gland, a walnut-sized gland situated directly below the bladder in men. The prostate gland produces fluid (semen) that nourishes and transports sperm. Prostatitis often causes painful or difficult urination. Other symptoms include pain in the groin, pelvic area or genitals and sometimes flu-like symptoms. Sometimes the cause isn't identified. If prostatitis is caused by a bacterial infection, it can usually be treated with antibiotics (**Pierzynski, 2017**).

The present study was found that more than two thirds (68.3%) of patients diagnosed with chronic prostatitis were aged 20:40 years while less than fifty (43.3%) of them were illiterate, also majority (87%) of them live in urban area, and less than two thirds (61.7%) was driver, This is in the same line with **Sadek&Adly (2018)**, who reported in a published study entitled as "Design of Kegel Exercises Booklet (Arabic Language) As Health Awareness from Prostatitis" conducted in Egypt, that all of their subjects were in age group of 20-50 years and 40% of them illiterate, also cleared that 79% of them live in urban area and 59% was driver. This finding disagreement with **Hao et al., (2018)** who reported in a published study entitled as "Symptoms, sexual dysfunction and psychological burden in Chinese men with chronic prostatitis/chronic pelvic pain syndrome" conducted in China who found that 25.7% of patients were high education. From the view of the researchers the drivers more risky to chronic prostatitis because drivers sitting long periods during driving

The current study showed that majority (86.7%) of patients Diagnosed with Chronic Prostatitis had insufficient

income, this finding in the same line with **Hao et al., (2018)** who reported that reported that 81.25% of the subjects were had insufficient income.

Regarding to patients diagnosed with chronic prostatitis current medical data, the study result revealed that more than three quarter (76.7%) of them complain from decrease sexual activity, this finding in the same line with **El Meliegy & Torky, (2018)** who reported in a published study entitled as "An observational study to monitor the efficacy and tolerability of levofloxacin 500 mg once daily for treatment of chronic bacterial prostatitis" conducted in Saudi Arabia, that 74% of the patients diagnosed with chronic prostatitis complain from decrease sexual activity.

The study also cleared that majority (81.6%) of patients diagnosed with chronic prostatitis suffering from cardiac disease this result was supported by **Gandaglia et al., (2018)** who reported in a published study entitled as "The role of chronic prostatic inflammation in the pathogenesis and progression of benign prostatic hyperplasia (BPH)" conducted in Bangladesh, showed that 78% of studied sample complain from cardiac disease, also the present study showed more than two thirds (66.7%) suffering from Premature ejaculation. This result was supported by **Vasan, (2017)** who reported in a published study entitled as "Complications of chronic prostatitis. Current Bladder Dysfunction Reports" indicated that 73% patients suffering from premature ejaculation and painful ejaculation.

This study cleared that highly statistically significant improvement in patients' correct knowledge regarding chronic prostatitis and coping strategy Intervention pre and post coping strategy Intervention implementation, this finding

was supported by **Rees et al.,(2018)**who reported in a published study entitled as "Diagnosis and treatment of chronic bacterial prostatitis and chronic prostatitis/chronic pelvic pain syndrome: a consensus guideline" conducted in United Kingdom illustrated that statistically significant improvement in patients' knowledge regarding chronic prostatitis before and after coping strategy Intervention implementation.

The existing study showed that highly statistically significant improvement in total score knowledge of patients diagnosed chronic prostatitis regarding chronic prostatitis and coping strategy Intervention in post –intervention than pre – intervention, this is in inconsistent with **El Meliegy &Torky, (2018)** who report that highly statistically significant improvement in total score knowledge of patients diagnosed chronic prostatitis regarding chronic prostatitis, also This finding supported with **smith, et al., (2017)** who reported in a published study entitled as "Sexual and Relationship Functioning in Men with Chronic Prostatitis/Chronic Pelvic Pain Syndrome and Their Partners" reported an improvement in total score knowledge of studied sample post coping strategy Intervention implementation. From the researchers' point of view, it means that patient should be determining by the nature of disease to be cope with chronic case.

Concerning coping strategy intervention : this study result revealed that statistical significant improvement in total mean total coping strategy by studied sample post coping strategy intervention compared to pre , this finding was in agreement with **Matthew &Elterman, (2018)** who reported in a published study entitled as" Men's mental health: connection to urologic health and coping strategy Intervention

implementation" who indicated that significant improvement post chronic prostatitis post coping strategy Intervention implementation.

This result agreement with **Jensen et al., (2017)** who studied "The Chronic Pain Coping Inventory: Development and preliminary validation Pain" in England, who reported an improvement in total mean total coping strategy Intervention by studied sample post than pre-coping strategy Intervention implementation, also **Riley et al., (2016)** who studied "Empirical subgroups of the Coping Strategies Questionnaire–Revised: A multi sample study" in New York, showed that an enhancement of studied sample coping after coping strategy Intervention implementation.

Regarding to correlation between total mean coping strategy and total mean scores knowledge, the present study showed highly statistical significant positive correlation between total mean coping strategy and total mean scores knowledge of the studied Sample pre and post-intervention, also This finding is in agreement with **Wang et al., (2017)**who reported in a published study entitled as "Social Determinants of Chronic Prostatitis/Chronic Pelvic Pain Syndrome Related Lifestyle and Behaviors among Urban Men in China: A Case-Control Study" conducted in China who indicated that positive correlation between coping strategy Intervention and improving patients' Lifestyle, and this finding was in accordance with **Shoskes, (2018)**who reported in a published study entitled as" Chronic Prostatitis/Chronic Pelvic Pain Syndrome "indicated that statistical significant positive correlation between patients' coping strategy Intervention and pelvic pain syndrome after coping strategy Intervention implementation.

Conclusion:

Coping strategy Intervention implementation aid the patients diagnosed with chronic prostatitis to cope with chronic prostatitis, also their knowledge regarding chronic prostatitis improved, the study results also revealed a highly statistically significant positive correlation of total mean coping strategy Intervention and total mean scores knowledge post coping strategy Intervention implementation.

Recommendations:

1. Providing booklet to patients diagnosed with chronic prostatitis to describe the natural of disease and how to cope with this type of chronic disease

2. Design and hinting poster about coping strategy Intervention regarding prostatitis in Urology outpatient clinic

3. Further researchers are needed in other setting and implement coping strategy Intervention for patients diagnosed with chronic prostatitis

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