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Chronic Lower Back Pain and Coping Behaviors among Older Adults

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Abstract
Background:*Chronic lower back pain affects all aspects of life of older adults. Coping behaviors are very important to support older adults to tolerate with chronic lower back pain.* ***Aim****: Assessment of chronic lower back pain and coping behaviors among older adults.* ***Method****: A descriptive correctional study design was used in this study. This study was done in the outpatient clinics at Belqas Central Hospital, Mansoura, affiliated to Ministry of Health. A purposive sample of 175 of the older adults diagnosed with chronic lower back painwere enrolled in the study.Data was collected using: older adults Socio-demographic data structured interview schedule, Medical data structured interview schedule, Oswestry Low Back Pain Disability Questionnaire, Chronic lower back pain coping behaviors schedule, The Geriatric Depression Scale and Geriatric Anxiety Scale.****Results****: 58.9% of the studied subjects have severe degree of low back pain, 44.6% of them have a continuous pain throughout the day, 74.9% of them are obese. In addition,Faith and praying used as a coping behavior by nearly all of the studied subjects with a mean score of (17.95± 0.39).****Conclusion****: Severe degree of chronic lower back pain was reported by the majority of the studied subjects and a statistically significant positive correlation was found between severity of pain and using of coping behaviors.****Recommendation****: Development a guideline for all nurses focuses on teaching and assisting the elders with chronic lower back pain to maintain a positive approach toward their condition and prevention of its progression and complications.*

Key words: *Chronic, Lower back pain, Coping behaviors, Older adults.*

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I. Introduction

Low back pain (LBP) is one of the most disabling health conditions amongst older adults aged sixty years or above. Whereasmaximum reasons of LBP amongst older adults are non-specific and self-limiting, older adults are susceptible to increase LBP pathologies and/or chronic LBP given their age-related physical and psychosocial changes. Low back pain (LBP) is the maximum commonplace health problem that leads to pain and disability amongst older adults. Older adults aged sixty-five years or more are the second one maximum commonplace age group to go to physicians for LBP.[1]

lder adults aged 65 years or above are
more likely to develop chronic LBP that lasts for more
than 3 months

The incidence of chronic LBP extended from 3.8% amongstolder adults aged amongseventy-seven and seventy-nine years to 9.7% amongst those aged between ninety and hundred years[2]. Williams and coworkers additionally determined that older adults aged eighty years or more have been three times much more probably to have severe LBP than those aged amongfifty and fifty-nine years. Because intense LBP typically consequences in poor treatment outcomes and functional disability[3]. Other researchhas counseled that the musculoskeletal pain in older adults' ranges from 65% to 85%, with 36% to 70% of them tormented by returned pain[1].

Older adults are much susceptible to broaden certain LBP pathologies e.g., spinal infection, osteoporotic vertebral fractures, tumors. Physical inactivity, age-related changes in critical pain processing, and dementia, in addition multiple risk factors e.g., genetic, gender, and ethnicity may affect on the prognosis and management of LBP in elderly. These risk factors for LBP are not limited to physical factors; psychosocial factors such as, anxiety, depression, stress and monotony are also potential risk factors for LBP. These risk factors can lead to the development from an acute LBP episode to a chronic problem[4].

Collectively, by comprehension the effects of different factorson the assessment and remedy of older adults with LBP.Clinicians and researchers can work toward the direction which is more effective according to the cost and personalized of LBP management for older adults. Also,comprehensive history taking, observational pain assessments, in addition to proper physical examination are vital for variousdiagnoses amongst older adults with LBP, awarenessmust be given to remedy of older adults with LBP so as to promote pain management[1]. Coping with pain is acritical element in pain perception and responses. Thus, it performs a critical function in the healing process. Coping mean making cognitive and behavioral efforts to manipulate the extrinsic and intrinsicneeds which, older adult considers as alleviating his/her resources. These behaviors as distraction, praying and distancing from critical life events[5].

Aim of the study

Assessment of chronic lower back pain, and coping behaviors among older adults.

Research questions:

Q1.What is the severity of chronic lower back pain?
Q2. What are the contributing factors of chronic low back pain?
Q3. What are the coping behaviors for chronic lower back pain?
Q4. What is the type of relationship between chronic lower back pain and coping behaviors among older adults?

II. Subjects & Method

Design:A descriptive- correctional study design was used in this study.

Setting: The study was done within the outpatient clinics at Belqas Central Hospital, redirected to Ministry of Health, Dakahlia Governorate.

Subjects:A purposive sample of 175 of the older adults diagnosed with chronic lower back pain attending the above-mentioned settings; aged sixty years and above, suffer from chronic lower back pain from three months and above, capable of communicate, comprehend, and willing to take part in the study. Older adults who have acute pain, psychiatric and neurological disorders, and severe organ failure (heart, lung or liver, cancer of back that severe enough to limit patient autonomy) were excluded. The sample size was calculating through the EPI info V 7.0 was used to evaluate the sample size with the aid of the usage of the subsequent parameter: Estimated population size during one year = 700, Expected frequency = 15%, Acceptable error: alpha error =5% and beta error= 20%, Study power= 80%, Confidence coefficient = 95% . So, the required sample size will be 175 subjects.

Tools: Six tools were used in the study to collect the necessary data.

Tool I: Older adults Socio-demographic data structured interview schedule

This tool was used to collect dataabout older adult patients which includes age, sex, marital status, level of education, living condition, career before retirement, recent occupation and income.

Tool II: Medical data structured interview schedule

This tool was developed by the researcher based on review of relevant literature and divided in two parts:

Part I: Medical history such as: diagnosis, duration of disease, medication used, in addition to body mass index calculation , which classified according ***(WHO, 2004)***[6] to: Underweight (<18.5), Normal range (18.5-24.9) , Overweight (25.0-29.9) , Obese class I (30.0-34.9) , Obese class II (35.0-39.9) , Obese class III (≥40) .

Part II: It concerned with assessment of pain such as: Time of its onset, frequency, factors increasing or decreasing pain and medication used.

Tool III:Oswestry Low Back Pain Disability Questionnaire

This Questionnaire was developed by **Fairbank and Pynsent, (2000)**[7], it was used to assess the severity of pain and how back pain is affecting the patient`s ability to control everyday life activities and measure a patient permanent functional disability. The scale included ten sections namely, pain intensity, personal care (washing, dressing, etc.), lifting , walking , sitting , standing , sleeping, sex life ,social life and travelling . The total score for each section is 5, it is ranged from zero to 5, if the first statement is marked the section score equal zero, if the last statement is marked it equal 5. The score achieved by the older adults was calculated as percentage from the score of his category representing 100%. According to Oswestry questionnaire the degree of the older adult's disability was classified into five categories:

1-Minimal disability: Those who score from 0% to 20%.
2-Moderate disability: Those who score from 21% to 40%.
3-Severe disability: Those who score from 41% to 60%.
4-Crippled disability: Those who score from 61% to 80%.
5-Bed-bound or exaggerating: Those who score from 81% to 100%.

Tool IV: Chronic lower back pain coping behaviors structured interview schedule

This tool was developed by the researcher after reviewing the relevant literature**Jensen, (1995)[8]&Kraaimaat, (1995)[9]&Keefe, (1997)[10]&Kraaimaat, (1997)[11]& Aldrich, (2000)[12]& Floris, (2003)[13]&Buhle, (2012)[14]&Kongsted, (2015)[15]**. It was used to identify coping behaviors of elderly patients with chronic lower back pain. This tool included eight sections namely, distraction, reducing demands, retreating, pain transformation, worrying, faith and praying, resting, and finally cognitive distraction. The scoring system used seven point Likert scale: never=(0), almost never=(1), few times=(2), sometimes=(3), many times=(4), almost always=(5), always=(6). The higher score indicates greater use of those particular coping behaviors.

Tool V: The Geriatric Depression Scale (GDS), Short Form-15.

This scale is a self-report instrument, it was evolved through **Sheikh, and Yesavage(1986)[16]**to value depression and overall well-being of the older adult. This scale became translated into Arabic and permitted to be valid and reliable by **Elhuseiny, (2013)[17]**. The older adult selects the best answer either yes: one (1) or No= zero (0) for how he/ she have felt over the last week. From the 15 questions, 10 questions were suggesting the presence of depression when answered positively, while the rest (question numbers 1, 5, 7, 11, 13) were suggesting depression when answered negatively. Scores ranges from zero to 15, items are summed for total score. Score from 0 to four suggests no depression, score from five to eight was suggesting mild depression, and score from nine to eleven was suggesting moderate depression and score from twelve to fifteen suggests severe depression.

Tool VI: Geriatric Anxiety Scale (GAS)

This Scale was evolved through **Segal et al., (2010)[18]** is a 25-item self- report instrument, it was used in the present study to assess symptoms of anxiety of the elderly. They were asked to rate symptoms of anxiety by indicatinghow often they have experienced each symptom during the past week. The scoring system was done using (4) four point Likert scale: not at all =(0), sometimes=(1), most of the times=(2), all of the times=(3). Possible scores range from 0 to 75, with higher scores indicating the presence of more severe anxiety.

Method

1. A formal permission was taken from the Faculty of Nursing, Mansoura University to carry out the research.
2. An official letter was issued with approval from the director of the hospital after explanation of the purpose of the study and the schedule of data collection.
3. Tool II (medical data structured interview schedule) and tool IV **(**Chronic lower back pain coping behaviors structured interview schedule) were evolved through the researcher based on review of relevant literature.
4. Arabic version of tool V (The Geriatric Depression Scale) GDSwas used to assess degree of depression in older adults.
5. All study tools II, III, IV, V, and VI were tested and validated by seven experts in the gerontological nursing and necessary modifications were done.
6. Tool III (Oswestry Low Back Pain Disability Questionnaire), tool VI (Geriatric Anxiety Scale) and Tool IV (Chronic lower back pain coping behaviors structured interview schedule)were translated into Arabic and tested for its reliability by Cronbach's Alpha (r) = 89%, 91% and 79% respectively.
7. A pilot study was done on 10% of the older adultsfrom El Mansoura University Hospital outpatints clinics andthey were excluded from the study sample.
8. Each older adult was interviewed by the researcher individually in the waiting room in the morning at the outpatient clinics at Belqas Central Hospital based on the schedule days from 9 A.M to 2 P.M to collect the necessary data.
9. All elders include in the study were alert, cooperative and able to converse with the researcher.
10. The researcher started the interview by introducing herself, the purpose of the study and ensured that the elderly was seated comfortably.
11. The researcher managed to interview from 2 to 3 elders daily.
12. Time of each interview ranged from 40-50 minutesto complete the study tools according to the level of understanding and cooperation of the study subjects.
13. Data were collected during a period of 4 months starting on 1st August 2018 and ended on 30 November 2018.

Ethical considerations:

Ethical Approval was obtained from Mansoura University, Faculty of Nursing Ethics Committee.Verbal consent was also accepted after explanation the goal and the nature of the study. Privacy of the subjects was assured, informed about their right to withdraw from the study at any time and privacy of the collected data was maintained. Confidentiality and anonymity of the collected data were assured.

Statistical analysis:
Data was analyzed using with statistical package for social science (SPSS) version 16. Qualitative data were described using number and percent. Association between categorical variables was tested using Chi-square test. Continuous variables were presented as mean ± SD(standard deviation). The two groups were compared with Student t test.Analysis of Variance (ANOVA test) used for comparison of means of more than two groups. Graphs were done for data visualization using Microsoft Excel. For all above mentioned statistical tests done, the threshold of significant when the probability of error is less than 5% ($P < 0.05$).

III. Results

Table 1 shows that 71.4% of the studied subjects are aged from 60 years to less than 75 years, 26.9% from 75 years to 85 years, and 1.7% from 85 years and morewith a mean of 70.99 ± 5.46. Regarding sex, females constituted 62.3% of the studied subjects and 37.7% are males.In regard to the marital status, 58.3% of the studied subjects are un married (widow, divorced) and 41.7% are married. In relation to the educational level, 76.0% of the studied subjects are illiterate, 16.6 % are read and write, basic education was found in 4.6% of the studied subjects, secondary education was found in 1.7% and university education in 1.2%.

Concerning occupation prior to retirement, 50.9% of the studied subjects are housewives, 44.6% have skilled work. While, 2.9% are employees, and 1.7% of the studied subjects have not work. Regarding living condition, 58.9% of the studied subjects living with one of child and 41.1% living in their own homes with their families. Regard the monthly income, 84.6% of the studied subjects reported that the source of income is child help , 84.0% of the studied subjects reported that their monthly income was not enough. While, 81.7% is official social assistance.

Table 2illustrates that 74.9% of the studied subjects are obese and 25.1 % are overweight. Regarding smoking, the majority of the studied subjects (94.3%) are nonsmokers, while more than half of them (53.1%) reported that they exposed to negative smoking sometimes.

Regarding depression, 84.0% of the studied subjects have moderate depression and 16.0% have mild depression. As regards anxiety, 77.1% of the studied subjects have moderate anxiety and 22.9% have mild anxiety.

Table3 shows that 39.7% of the studied subjects suffering from chronic lower back painfrom 12 months and more, 3.4% from 6 to 12 months and 2.9% of the studied subjects from 3 months to 6 months. Regarding to the intensity of chronic lower back pain, 96.0% of the studied subjects reported increasing pain intensity in the evening and 4.0% in the morning.

Regarding, recurrence of the pain throughout the day, 44.6% of the studied subjects have a continuous pain throughout the day, 37.7% have recurrent pain three times a day, 16.0% have recurrent pain twice a day and 1.7% of the studied subjects have recurrent pain once every two days.

Concerning factors increase intensity of pain, incorrect body mechanisms are reported by 69.8% of the studied subjects, 57.1% of them are reported lack of mobility, 41.7% are reported sleep for a long time, 21.1% are reported life stress, 4.6% are reported still work.

Figure 1demonstrates that 58.9% of the studied subjects have severe low back pain, 25.7% have very severe low back pain. While, 10.3% have moderate low back pain and 5.1% of the studied subjects have worst low back pain with a mean of 3.26±0.71.

Table 4 shows that (faith and praying) used as a coping behavior by the majority of the study subjects with a mean score of (17.59 ± 0.39) and followed by (resting) with a mean score of (20.93 ± 5.08).On the other hand, (distraction) was less used as a coping behavior among the studied subjects with a mean score of (12.84 ± 2.30) and followed by (reducing demands) with a mean score of (8.34 ± 2.59). The total mean score of coping behaviors is 150.14±12.06.

Table 5presents that there was statistically significant difference between severity of pain and each of age (P=0.000), social status (P=0.003) and level of education (P=0.041). Regarding age, 77.8% of the studied subjects who aged 75 to less than 85 years had worst pain and 84.5% of the studied subjects who aged 60 to less than 75 years had severe pain.

Regarding sex, the table illustrates that, worst degree of pain was reported by 66.7% in males and severe degree of pain was reported by 67.0% in females. As regards social status, 82.2% of the studied subjects who had severe pain are widow. Concerning the level of education of the studied subjects, the same table illustrates that severe degree of pain 93.3% is reported by illiterate older adults. As for the monthly income, 91.1% of the studied subjects reported that they haven't enough income.

Table 6 shows that there was statistically significant difference between severity of pain and each of distraction (P=0.003), reducing demands (P=0.002), retreating (P=0.000), worrying (P=0.038), resting (P=0.000), faith and praying (P=0.013) and cognitive distraction (P=0.004) when using as coping behaviors.

Table 1: Socio-demographic characteristics among the studied subjects:

Demographic characteristics	Studied subjects	
	N=(175)	(%)
Age (in years):		
60-	125	71.4
75-	47	26.9
85+	3	1.7
Mean ± SD	70.99 ± 5.46	
Sex:		
Female	109	62.3
Male	66	37.7
Marital status:		
Un married*	102	58.3
Married	73	41.7
Level of education:		
Illiterate	133	76
Read and write	29	16.6
Basic education	8	4.6
Secondary education	3	1.7
University education	2	1.2
Occupation before retirement:		
Housewives	89	50.9
Skilled work	78	44.6
Employees	5	2.9
Non-employees	3	1.7
Living condition:		
With one child	103	58.9
With family	72	41.1
Monthly income(LE):		
Not enough	147	84
Enough	28	16
Source of income:#		
Children help	148	84.6
Official social assistance	143	81.7
Owners	24	13.7
Pension	23	13.1
Others	8	4.6

#More than one answer was given.

* Unmarried (Widow and divorced)

Table 2: Distribution of the studied subjects according contributing factors of chronic lower back pain:

Contributing factors	Studied subjects	
	N=(175)	(%)
Obesity:		
-Obesity and its degree (30 and more)	131	74.9
-Over weight (25-29.9)	44	25.1
Smoking:		
-No	165	94.3
-Yes	10	5.7
Negative smoking:		
-Yes	93	53.1
-No	82	46.9
Depression:		
-Mild	28	16
-Moderate	147	84
-Severe	0	0
Anxiety:		
-Mild	40	22.9
-Moderate	135	77.1
-Severe	0	0

Table 3: Characteristics of chronic lower back pain (CLBP) among the studied subjects:

Items	Studied subjects	
	N=(175)	(%)
Duration of suffering CLBP:		
		2.9
- 3-6 months	5	3.4
- 6-12 months	6	93.7
-12 months and more	164	
Time of increase pain intensity:		
-Evening	168	96

-Morning	7	4
Recurrence of pain/ day:		
-Continuous throughout the day		
-Three times a day	78	
-Twice a day	66	44.6
-Once every two days	28	37.7
	3	16
		1.7
Factors increase intensity of pain :#		
-Incorrect body mechanisms	122	69.8
-Lack of mobility	100	57.1
-Sleep for a long time	73	41.7k2
-Life stressors	37	21.1
- Still working	8	4.6
Measures of pain relieve:#		
-Massage the place of pain	175	100
-Sitting and standing n in suitable position	93	53.1
-Never carrying heavy things	11	6.3
-Minimize physical activity	9	5.1
-Wear a belt	3	1.7
Medications used to relieve pain:		
-Analgesics	150	85.7
- No medication	25	14.3

More than one answer was given.

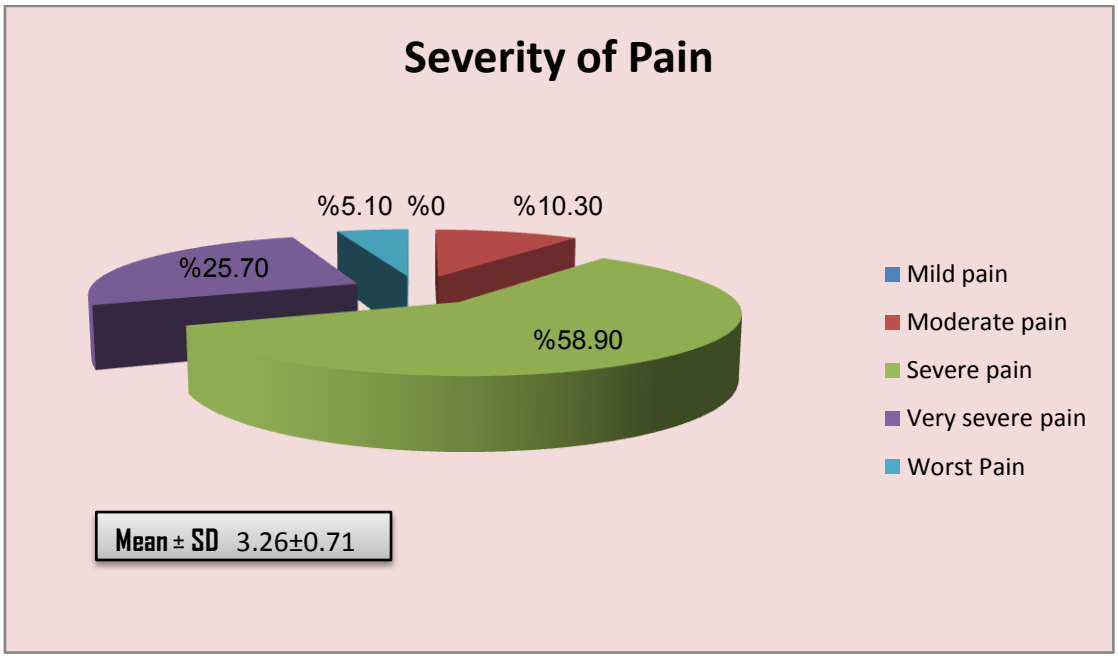

Figure 1: Severity of chronic lower back pain among the studied subjects

Table 4: Distribution of the studied subjects according to coping behaviors: N= (175)

Coping behaviors	Total Score	Mean ± SD
1-Pain transformation	24	15.29±2.92
2-Distraction**	30	12.84±2.30
3- Reducing demands**	18	8.34±2.59
4- Retreating	42	25.58±4.08
5- Worrying	54	34.10±3.78
6- Resting*	30	20.93±5.08
7- Faith and praying*	18	17.95 ±0.39
8- Cognitive distraction	24	15.07±2.54
Total score of coping behaviors	*240*	*150.14±12.06*

**coping behaviors (Most used)*

***coping behaviors (Less used)*

Table 5: Correlation between demographic characteristic and severity of pain among the studied subjects:

Demographic characteristics		Pain Severity								Pearson Chi-Square $\chi 2$ test (P)
		Moderate		Severe		Very severe		Worst		
		N	%	N	%	N	%	N	%	
Age in years	60-75yrs	18	100%	87	84.5%	18	40.0%	2	22.2%	$\chi 2$= 49.653 P= 0.000**
	75-85yrs	0	0%	15	14.6%	25	55.6%	7	77.8%	
	>85yrs	0	0%	1	1.0%	2	4.4%	0	0%	
Sex	Male	7	38.9%	34	33.0%	19	42.2%	6	66.7%	$\chi 2$=4.582 P= 0.205
	Female	11	61.1%	69	67.0%	26	57.8%	3	33.3%	
Social status	Married	13	72.2%	49	47.6%	8	17.8%	3	33.3%	$\chi 2$= 20.197 P= 0.003**
	Unmarried***	5	27.8%	54	52.5%	37	82.2%	6	66.7%	
Level of education	Illiterate	15	83.3%	67	65.0%	42	93.3%	15	83.3%	$\chi 2$= 21.694 P= 0.041*
	Reads and writes	2	11.1%	27	26.2%	0	0%	2	11.1%	
	Primary education	1	5.6%	5	4.9%	2	4.4%	1	5.6%	
	Secondary education	0	0%	2	1.9%	1	2.2%	0	.0%	
	University education	0	0%	2	2.0%	0	.0%	0	.0%	

-Pearson Chi-Square $\chi 2$ test *significant at p≤0.05 **significant at p≤0.01

Unmarried*** (widowed and divorced)

Table 6: Correlation between severity of pain and coping behaviors among the studied subjects:

Coping Behaviors	Pain intensity Mean ± SD				*Test of significance*
	2 Moderate	3 Severe	4 Very severe	5 Worst	
N	18	103	45	9	
Pain transformation	16.39±2.83	15.13±2.88	15.24±3.13	15.22±2.39	F=0.965 .P=0.41
Distraction	13.33±1.91	13.22±2.08	12.13±2.76	11.00±1.00	F=4.887 P=0.003*
Reducing demands	7.83±1.15	8.06±2.19	8.58±2.76	11.33±5.29	F=5.117 P=0.002*
Retreating	24.22±1.31	23.60±2.77	29.18±3.56	32.89±1.69	F=61.433 P=0.000**
Worrying	34.44±2.18	33.47±3.95	34.98±3.74	36.22±3.032	F=2.865 P=0.038*
Resting	17.89±1.75	19.19±4.03	24.56±5.07	28.67±2.00	F=31.861 P=0.000**
Faith and praying	17.67±0.97	17.97±0.29	18.00±0.00	18.00±0.00	F=3.717 P=0.013*
Cognitive distraction	14.56±1.38	14.71±2.22	15.64±2.82	17.44±4.39	F=4.592 P=0.004*

*significant at p≤0.05

**significant at p≤0.01

IV. Discussion

Chronic lower back pain is anessentialreason of disability. It is one of the maximum disabling and therapeutically challenging pain conditions afflicting older adults, which interferes with work performance and quality of life. Chronic lower back pain is a greater difficult problem, which often has a strong psychological overlay, boredom, work dissatisfaction, and a generous compensation system contribute to it. The degree of pain interference with daily living activities and increases with age, which is particularly relevant to primary care specialists and promote a clinically focused framework for organizing key historical and physical examination findings that drive the diagnostic and therapeutic decision making processes that arise in the routine care of older adults with chronic lower back pain Mlinac et al., (2016)[19]&Stamm et al., (2016)[20].

Chronic lower back pain is a stressor, when appraised leads to trials to reduce its effects by using of cognitive and behavioral mechanisms. In these terms, coping with chronic low back pain is a vital element in pain perception and responses. Thus, it plays an important role in the healing process and making cognitive and behavioral efforts to manipulate the extrinsic and intrinsicneeds which a person considers as increasing or alleviating his/her resources Lazarus, (2006)[21]& Cramer, (2015)[22]& Hooten et al., (2015)[23].This study was conducted to assess the chronic lower back pain and coping behaviors amongst older adults.

With regard to the socio-demographic characteristics of the study subjects, this study revealed that, the majority of the study subjects are young old. This result is in accordance with a study done in Taiwan by Chouet al. (2013)[24] who reported that the majority of the elderly are young old.

As for sex, nearly two thirds of the studied subjects are females, this may be due women normally have a higher riskof concomitant chronic diseases (e.g., osteoarthritis,osteopenia, and osteoporosis), which are known to berisk factors for alleviating chronic LBP and psychologicaldistress in older adults Kim, (2014)[25]. Also, women who have had two or more pregnancies have a higher risk of alleviating chronic lower back pain Palacios-Ceña, (2015)[26]. This result is supported by a study done inSpain byJiménez-Sánchez, (2012)[27]who found that females are more prone to chronic lower back pain than males regardless of age. In contrast, male constituted more than half of the studied subjects in study done in Egypt by Al-Disoky et al., (2015)[28].

Regarding the material status, more than one half of the studied subjects are un married, this finding is supported by a study done in Taiwan byChouet al. (2013)[24]who reported that the study subjects with no spouse or significant other faced a higher risk of chronic lower back pain .In contrast, a study done in Egypt by Al-Disoky et al., (2015)[28] not agree with the study result who found that, more than one half of the study subjects were married.

As for educational level, more than one half of the studied subjects are illiterate. This result is in accordance with a study done in Taiwan by Chouet al., (2013)[24] who found that, chronic low back pain was higher in the most of the study subjects with low education than others with high education.

As regards the monthly income, the majority of the studied subjects reported that their monthly income is not enough. This finding is supported by a study done in Denmark by Hartvigsenet al., (2018)[29] who found that the largest increases in disability caused by low back pain in the past few decades have occurred in low-income and middle-income countries, including in Africa, Asia and the Middle East. In contrast, a study done in Egypt by Al-Disoky et al., (2015)[28] who reported that the majority of the study subjects reported that their monthly income is enough.

Regarding characteristics of chronic lower back pain, this study results revealed that, the majority of the studied subjects were suffering from chronic lower back pain from 12 months and more. This may be due to the effect of distress, depressive mood, and somatization which are associated with an increased risk of chronic lower back pain. This finding is in accordance with that of Shmagel et al., (2016)[30] who reported thatthe majority of the study subjects suffering from chronic lower back pain from 12 months and more. Also, other studies done in Australia by Koes, (2010)[31] and in Brazil by Mostagi et al., (2015)[32]supported this result.

As regards the recurrence of pain/day, this study revealed that, almost one half of the studied subjects have a continuous pain throughout the day. This may be due to nearly two thirds of the studied subjects are females and they still have many home responsibilities and duties.Also, most of males still working hard skilled work till now. In addition, lack of effective interventions for decrease low back pain and limited comprehension of etiology and risk factors for developing either a first or recurrent episode of LBP Hancock et al., (2015)[33]. This finding is supported by other studies done in Australia by Stanton, (2010)[34] and in New England by Da Silva et al., (2017)[35] who reported that the majority of the study subjects have a continuous pain throughout the day.

The significance of physical activity in the remedy of low back pain is generally accepted. However, an increasing in physical activity has been suggested to be either a preventive factor or a possible risk factor for low back painHeneweer et al., (2011)[36].The majority of the studied subjects reported that, the use of incorrect body mechanisms and lack of mobility are considered risk factors that increase intensity of low back pain. This result is supported by other studies done in German by Heneweer et al. (2011)[36] and in UK by Gordon et al., (2016)[37] who found an association between high physical workloads and back injury such as strenuous

workloads, occupational exposure , frequent bending, lifting and twisting, and extreme sports activities are risk factors for low back pain. At the same time, it is suggested that an inactive or sedentary lifestyle is associated with low back pain complaints.

According to severity of pain, this study results revealed that, more than one half of the studied subjects have severe pain. This may be related to more than one half of the studied subjects were being physically inactive. Also, age related changes in perception of low back pain and approaches to assessment and remedy of chronic low back pain in older adults. This finding is supported by a study done in Brazil by Pereira et al., (2014)[38] who proposed that more than one half of the elderly have severe pain. Also, this finding is in accordance with that of other studies conducted in Sweden by Ghanei et al., (2014)[39], in Spain by Gálvez-Barrón et al., (2015)[40]and in China by Wong et al. (2017)[1].

Regarding distribution of the studied subjects according to use of coping behaviors with chronic low back pain, this study revealed that, nearly all of the studiedsubjects used of faith and praying most frequently as a coping behaviorto tolerate the pain. It can be explained by the fact that the Arab people generally and especially the Egyptian tend to use emotion and get closer to God, especially in the presence of problems. This finding is supported by other studies done in Warsaw Poland by Cabak et al., (2015)[5] and in California by Zimmer et al., (2016)[41] who reported that the majority of the older adults used praying and hoping as a coping strategy to cope with chronic low back pain. This result is in contrast with other studies done in Poland byGłowacki et al., (2013)[42] and in Swansea, UK by Snelgrove et al., (2013)[43] who proposed that the majority of elderly used worrying as a coping behavior with CLBP.

On the other hand, the least frequently used of coping behaviors by the studied subjects were distraction followed by reducing demands to minimize or tolerate chronic low back pain.This may be due to the majority of the studied subjects are from rural areas and two thirds of them are illiterate and cannot use these coping behaviors that include brain storming if used. This result is in contrast with other studies done in Germany by Kohl et al., (2013)[44] and in Ireland by Fox et al., (2016)[45] who reported that the majority of the studied subjects used distraction as a coping behavior with CLBP.

The results of the present study noticed that, worst degree of LBP was more prevalent in the older age group than the younger age group and the difference is statistically significant. This may be justified by the severity of pain increased as increasing age, due to age related changes that occur in older adults as changes in pain perception and physiological changes as age-related loss of muscle strength, changes to the skeletal musculature and changes in strength or powerNigam et al., (2012)[46]. This is in accordance with other studies done by Hoy et al., (2012)[47] and Prince et al., (2015)[48] who reported that, the severity of back pain increased after seventy years of age, and the difference is statistically significant between age and severity of pain.

In respect to sex, nearly two thirds of male subjects reported worst degree of LBP than females. Yet, nearly two thirds of females reported severe degree of low back pain than males and no statistically significant difference was found between males and females and the severity of pain. This may be related to that most of elderly males still working hard skilled work till now. Also, women are at higher risk of low back pain due to the effect of the physiological changes caused by relatively lower level of sex hormones after menopause, and the accelerated lumbar disc degeneration. This is in contrast with other studies done in Spain by Fernández et al., (2011)[49] and in China by Wang et al., (2013)[50] who reported that severity of pain increase in females than males.

As for social status, the present study revealed that, unmarried elders reported worst degree of low back pain than married elders, and the difference is statistically significant between social status and the severity of pain. This is in accordance with a study done in Japan by Ikeda et al., (2019)[51] who reported that, the statistically significant relation was found between social status and severity of pain and increased in older adults who lived alone. This is in contrast with other studies done in Turkey by UndeAyvat et al., (2012)[52] and in Brazil by Da Silva et al., (2015)[53]who reported that severity of low back pain increased in married individuals may be related to greater ergonomic exposure, either at home or at work.

Concerning educational level, the elders who are illiterate reported worst degree of pain than those with higher educational level and the difference is statistically significant. This can be justified by the fact that lack of education will result in ignorance of healthy lifestyle and risk factors that increase intensity of LBP. This finding is supported by other studies done in Spain by Palacios-Ceña et al., (2015)[26] and in Brazil by Batista et al., (2017)[54] who reported that older adults who have higheducational levels are less often affected by severe LBP than others with medium or low educational levels.

The current study found that, there was statistically significant positive correlation between severity of pain and using of coping behaviors. The studied subjects who have worst degree of low back pain reported higher use of coping behaviors to cope with low back pain than those with moderate or severe degrees of low back pain including (faith, praying, resting and worrying. This finding supported by other studies done in Warsaw, Poland by Cabak et al., (2015)[5]and in New York by DiNapoli et al., (2016)[55] who was found

statistically significant difference between severity of pain and pain transformation/sensation of pain, distraction, praying / hoping, cognitive distraction/ignoring the sensations and retreating.

V. Conclusion

Based on the results of the present study, it can be concluded that,severe degree of chronic lower back pain was reported by the majority of the studied subjects. The main factors that increasing of low back pain severity were; obesity, depression, and anxiety. Worst degree of CLBP was found in the older age group than the younger age group, in males than females and in those who are illiterate. Nearly all of the studiedsubjects used of (faith and praying) most frequently as a coping behaviorto tolerate the pain. While, distraction and reducing demands the least frequently used as coping behaviors by the studied subjects.

VI. Recommendations

In the light of the findings, the following recommendations are suggested:

1. Raise awareness of community dwelling older adults who attained the outpatient clinics and designing educational programs to enrich them and their caregivers with accurate information about chronic lower back pain and coping behaviors that use to decrease the pain.
2. Development a guideline for all nurses focuseson teaching and assisting the elders with chronic lower back pain to maintain a positive approach toward their condition and prevention of its progression and complications.

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