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Low Back Pain Beliefs and their Effect on Health Seeking Behavior among Adults, Mukalla, Yemen

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Abstract

Introduction: Low back pain (LBP) is a common health problem and a major cause for patients to seek care in primary setting. Many beliefs related to it can lead to disability and chronicity. The current study aimed to assess LBP beliefs and their effect on health seeking behavior.

Methods: A cross sectional study was conducted at primary health care center (PHCC) clinics during the period of October 25, 2016 to January 12, 2017, included all adults (18 years and older) with or without LBP visited the clinics during the study period, using the Arabic version of Back Belief Questionnaire (BBQ). Study sample was 423. Analysis was done using SPSS for windows version 20. Descriptive statistics, t-test, and ANOVA were used to show frequency distribution and association.

Results: Life-time LBP was found at 75.4%, and last week LBP at 45.9%. A total of 35% visited modern healers, while 37.1% did not seek any help for their pain. The mean belief score was 29.7±6.5, which was more negative among educated people (p=0.010). There was no association between back beliefs and history of LBP or seeking care to modern healers.

Conclusion: Adult's beliefs are not related to the decision to seek care, and are not differed by seeking proper care.

Keywords: Low Back Pain, Beliefs, Health Seeking Behaviors, Yemen.

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معتقدات الأشخاص البالغين حول مشاكل أسفل الظهر وتأثيرها على طلب الرعاية الصحية في المكلا، اليمن

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ملخص الدراسة

المقدمة: تعتبر آلام أسفل الظهر من المشاكل الشائعة بين البالغين التي تتردد على مقدمي خدمات الرعاية الصحية، والكثير من المعتقدات المرتبطة بها تساهم في تفاقم المشكلة وتحولها إلى مشكلة دائمة تلازم صاحبها. هدفت هذه الدراسة إلى تقييم معتقدات الأشخاص البالغين حول مشاكل أسفل الظهر وتأثيرها على طلب الرعاية الصحية.

المنهجية: تم تنفيذ دراسة مقطعية عرضية شملت الأشخاص البالغين (الذين يعانون والذين لا يعانون من آلام أسفل الظهر) المترددين على عيادات المراكز الصحية في مديرية المكلا خلال الفترة من 25 أكتوبر 2016 وحتى 12 يناير 2017. باستخدام النسخة العربية من استبيان معتقدات أسفل الظهر. كان إجمالي العينة 423 مستجيب، وقد استُخدِم الإحصاء الوصفي، واختبار تي، وتحليل التباين ذو المتغير الواحد لدراسة العلاقة بين المتغيرات، وقد عُرضت النتائج في جداول وأشكال توضيحية.

النتائج: أظهرت النتائج أن نسبة انتشار آلام أسفل الظهر كانت 75.4% خلال الحياة ، في حين أن نسبتها 45.9% في الأسبوع الماضي. متوسط معتقدات الأشخاص كان29.7 ± 6.5 والذي كان أكثر سلبية بين الأشخاص المتعلمين دون غيرهم، في حين لم تظهر علاقة بين هذه المعتقدات وبين إصابتهم بألم أسفل الظهر، ولا بطلبهم الرعاية الصحية من قبل الطبيب 35% من المستجيبين زارو الطبيب لطلب الرعاية، بينما 37.1% لم يفعلوا شيئاً لعلاج ألم أسفل الظهر.

الاستنتاج: إن معتقدات الأشخاص البالغين لم ترتبط بقرارهم طلب الرعاية الصحية، كما لم تكن لها علاقة بطلب الرعاية الصحية الصحيحة.

الكلمات المفتاحية: آلام أسفل الظهر، معتقدات، طلب الرعاية، الرعاية الصحية الأولية، اليمن.

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Introduction

Low back pain (LBP) is a public health issue worldwide. It is a main cause for disability that clearly affects work performances and well-being. Most primary care physicians can expect to see at least one patient with low back pain per week [1]. For the majority of these disorders, no pathoanatomical diagnosis can be made. In response to that, there is growing acceptance that LBP must be considered from a biopsychosocial perspective [2]. Current treatment guidelines for people with LBP emphasize early screening of psychological condition including people's beliefs [3]. Evidently, back pain beliefs have been found to be associated with chronicity and disability in LBP [4,5]. There is growing interest in the role of beliefs regarding LBP, as beliefs and expectations can modulate (facilitate or inhibit) pain responses in the brain and are central drivers of behavior and recovery [4].

Even though LBP is very common, not all people who suffer from LBP seek care for their problem. A new studies on care seeking for LBP found that is, 55.6% of individuals experiencing LBP sake professional care [4]. Beliefs about LBP if shown also to be significant determinants of care seeking, their modification through appropriate educational initiatives would represent a potentially useful means of reducing the demands on our health care systems [6].

LBP research in developing world has focused on prevalence data and on physical and environmental risk factors mainly, but didn't examine the psychosocial aspects including beliefs about back pain [2]. This is despite there has being a growing interest in the related literature in back pain beliefs in patients, general population and health care professionals [4,5]. Hence, the present study was designed to assess LBP beliefs and their effect on health seeking behavior among adults attending primary health care centers in Mukalla district by assessing three main elements: frequency of LBP as it hasn't been studied before in this population, beliefs about LBP according to Back Belief Questionnaire (BBQ), and health seeking behavior regarding LBP as well as the association between them.

Methods

Study design and setting

A cross-sectional descriptive study, took place in Mukalla district, Hadhramout governorate, Yemen. The health services provided in Mukalla district are divided into public and private sectors. The public sector remains the major provider of health care at all levels of services. At present, there are twenty six Primary Health Care Centers (PHCC), providing preventive and remedial services which are directed by the Ministry of Public Health and Population [7].

Population and sampling

The study targeted all adults (with or without low back pain), who visit the primary care clinics as patients or for follow-up, aged 18 years old and above during the study period. Sample size was calculated according to the following formula:[8]

$$n = \frac{z^2 (pq)}{d^2}$$

Where: n= the desired sample size.
z= certainty (for 95%=1.96)
p= proportion of negative beliefs of back pain in the population

There was no previous similar study in the general population, so 50% was used and the calculated sample size was 384. Ten percent or 39 was added to the sample size to account for the nonresponse. Finally, the sample size was increased to 423. Sampling method was a two-stage random sampling. In the first stage; the total number of primary health care centers were determined in Mukalla district as 26 centers, of them; 20 centers have physician in their clinics. Thereafter, ten centers were randomly selected from the total 20. In the second stage; the sample size was proportionally selected from the ten chosen centers according to the flow rate (of the last three months) in each center [7]. All adults visited the primary health care clinics starting at Oct 25, 2016 were included until the required sample was completed by Jan 12, 2017.

Study instrument

The study instrument was a questionnaire to collect data by the researcher and trained health workers in each health center. It consists of the following sections:

Percentage of low back pain

Participants were asked if they had experienced LBP: at any point of their life, during the last 12 months, and during the last week. A body chart was provided, with the region from the border of the rib cage to the gluteal folds shaded, to define the region of pain.

Low back pain beliefs

Negative beliefs were assessed using BBQ. The BBQ was originally designed to measure beliefs about the unavoidable consequences of low back troubles [9].

This questionnaire had been used to assert beliefs in both general and clinical populations It consists of 14 items and each item is scored on a 5-point Likert agreement scale (ranging from strongly agree to strongly disagree). Each item was described into three instead of the five categories (positive belief= disagree or strongly disagree), (neutral belief), and (negative belief= agree and strongly agree). However, only nine items are used in the scoring of the questionnaire with the remaining items generally considered to be ‘distracters’ from which no scores are derived. Possible scores ranged between 9 and 45, with lower scores indicating more negative beliefs about back pain [10].

Health seeking behavior

is defined as "an individual’s deeds to the promotion of maximum well-being, recovery and rehabilitation; this could happen with or without health concerns and within a range of potential to real health concerns"[11]. To avoid recall bias; only those who reported having experienced back pain during the past 12 months were included in health seeking behavior analysis. Health seeking behavior, in this study, was assessed using Kroeger socio-behavioral model as follows: Modern Healer: (qualified medical professionals), drug sellers, self-treatment, traditional healers, and no action taken [12].

Demographic characteristics: age, gender, educational level, marital status, and occupation.

Statistical analysis

Obtained data were checked for completeness, coded then processed with Statistical Package for Social Sciences (SPSS) version 20. Descriptive statistics included frequencies and percentages for categorical variables and means with standard deviations (±SD) for continuous variables. For BBQ reversed item scores were corrected before total score calculation. T-test, and Analysis of Variance (ANOVA) test was applied to compare the difference between means. An α level less than (0.05) was used to judge significance. Post hoc analysis using Tukey's honestly significant difference test was performed.

Ethical consideration

The study protocol was approved by the Family Medicine Department, Hadhramout University. All procedures were in accordance with the ethical standards of the institutional and national research committee. The objectives of the study were explained to the participants and a written informed consent was taken from all participants, as they have the right either to participate in the study or not. Further, if they choose to participate they were assured that their information will be used for research purposes only. Participant patients have the right to withdraw from the study at any time without giving any reason.

Results

Demographic data

The total sample of the study was 423, aged 18 years and older. Most participants were females, (73%) housewives, (68.8%). Further, about two thirds are not educated (72.1%). There is a statistically significant relationship between being educated participants and negative beliefs with $p = 0.011$ as shown in Table 1.

Table 1: Association Between LBP Beliefs and Demographic Characteristics among Adults Attending PHCC, Mukalla, Yemen, 2017 (n=423)

Demographic characteristics	No.	%	Mean Beliefs Score ± SD	ANOVA/ t-test	*p*
Age group					
< 25	122	28.8	29.2 ± 7.3	2.156	0.093
25 - < 35	147	34.8	29.2 ± 6.4		
35 - < 45	94	22.2	31.1 ± 5.6		
≥ 45	60	14.2	30.2 ± 5.8		
Gender					
Male	114	27	30.1 ± 6.6	757	0.449
Female	309	73	29.6 ± 6.4		
Marital status					
Married	313	74	30.0 ± 6.5	1.140	0.255
Not married	110	26	29.1 ± 6.4		
Educational level					
Educated	118	27.9	29.0 ± 6.5	2.539	0.011*
Not educated	305	72.1	30.7 ± 6.3		
Occupation					
Work	132	31.2	29.7 ± 6	0.027	0.978
Housewife/ not work	291	68.8	29.7 ± 6.6		

*statistically significant with p-value <0.05 *p*-values are generated by one-way ANOVA and t-test.

Percentage of LBP

The lifetime percentage of low back pain was 75.4%, and the last week percentage was 45.9% whereas 24.6% of respondents never complained of low back pain, as illustrated in Figure 1.

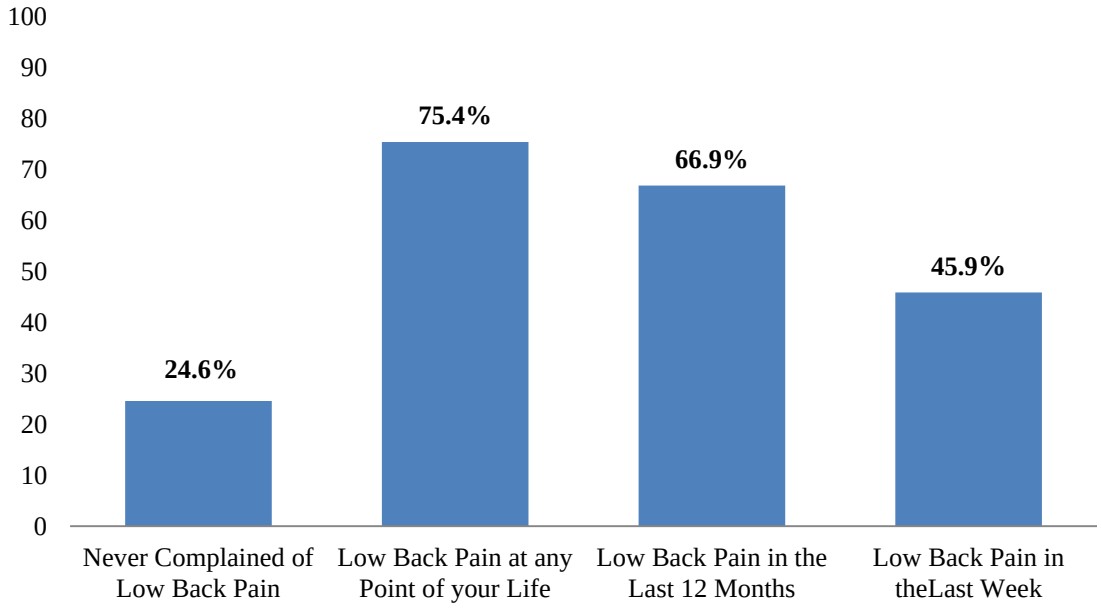

Figure 1: LBP among Adults Attending PHCCs, Mukalla, Yemen, 2017

LBP beliefs

The mean BBQ score was 29.7 (SD± 6.5) which had a normally distributed pattern. Table 2 shows that 67 (15.8%) thought there is no real treatment for LBP. Nearly two-thirds (65.2%) thought back pain will eventually stop them from working. About prognosis, 42.3% agreed that back pain means periods of pain for the rest of one's life, and 45.6% agreed that back pain may mean they will end up in a wheelchair. Moreover, 59.8% believed that back pain makes everything in life worse and 80.4% of respondents believe that later in life back trouble gets progressively worse. Most of the respondents, (92.5%), believed that back pain must be rested.

Table 2: LBP Beliefs According to BBQ among Adults Attending PHCC, Mukalla, Yemen, 2017 (n=423)

No.	Item	Disagree (positive belief)		Neutral		Agree (negative belief)	
		No.	%	No.	%	No.	%
1	There is no real treatment for back trouble	297	70.2	59	13.9	67	15.8
2	Back trouble will eventually stop you from working	107	25.3	40	9.5	276	65.2
3	Back trouble means periods of pain for the rest of one's life	179	42.3	65	15.4	179	42.3
4	Back trouble makes everything in life worse	146	34.5	24	5.7	253	59.8
5	Back trouble may mean you will end up in a wheelchair	177	41.8	53	12.5	193	45.6
6	Back trouble means long periods of time off work	131	31.0	44	10.4	248	58.6
7	Once you have had back trouble there is always a weakness	168	39.7	69	16.3	186	44.0
8	Back trouble must be rested	17	4.0	15	3.5	391	92.4
9	Later in life back trouble gets progressively worse	45	10.6	38	9.0	340	80.4

Health seeking behaviors

Table 3 demonstrates that one-third of respondent (35%) have visited doctors (modern healers) for their pain 37.1%, did nothing. There was no relationship between back pain beliefs and all types of care-seeking behavior. The mean belief score of those who visited modern healers is 30.1, while those who consulted traditional healers had the least score 29.0. Again, these differences were statistically insignificant, see Table 3.

Table 3: Association Between LBP Beliefs and Health Seeking Behavior among Adult Patients Attending PHCC, Mukalla, Yemen, 2017 (n=283)

Health seeking behavior for low back pain	No.	%	Mean Beliefs Score ± SD	t- test	*p*
Modern healer					
Yes	99	35.0	30.1 ± 7.1	0.205	0.838
No	184	65.0	30.0 ± 6.3		
Drug seller					
Yes	27	9.5	31.4 ± 6.9	1.17	0.243
No	256	90.5	29.9 ±6.5		
Traditional healer					
Yes	58	20.5	29.0 ± 6.9	-1.337	0.182
No	225	79.5	30.0 ± 6.5		
Self-treatment					
Yes	55	19.4	30.4 ± 7.5	0.46	0.646
No	228	80.6	29.9± 6.4		
Did nothing					
Yes	105	37.1	29.5 ± 6.4	-0.995	0.321
No	178	62.9	30.0 ± 6.7		

The mean belief score was higher for participants with last year pain and last week pain (30), than those without pain or with pain before last year (29.1, and 29.3 respectively) but this value was statistically insignificant, as seen in Table 4.

Table 4: Association between LBP Beliefs and History of Low Back Pain among Adults Attending PHCC, Mukalla, Yemen, 2017 (n=423)

History of low back pain	No.	Mean Beliefs Score ± SD	ANOVA	*p*
Never complained of LBP	104	29.1 ± 6.5	0.587	0.624
LBP before last year	36	29.3 ± 5.2		
LBP during last year	89	30.0 ± 6.5		
LBP during last week	194	30.0 ± 6.7		

Discussion

This is the first study about LBP beliefs involving primary care attendees based in Mukalla as of the researcher's knowledge. Patient beliefs are important in back pain development and recovery [5]. The lifetime percentage of LBP in this study, was 75.4%. Same result was found in other studies in Brazil [13] and Sana'a Nurses [14] but it is slightly higher than other studies in the United Arab Emirates [15], and Qatar [16]. On the other hand, it is lower than the percentage reported by studies in New Zealand [10] and Canada [17]. All these mentioned figures are similar to the globally estimated percentage for lifetime LBP (60-90%) [18].

The mean BBQ score in this study was 29.7± 6.5 which is nearly equal to the median (30) indicating neutral beliefs about back pain, which is similar to that reported from Australia (29.1± 6.4) [4] and higher than that reported from Canada (26.1±6.6) [10], USA (25.6±5.7) [19], and France (median 23.5) [20]. These differences may be because of cultural beliefs in the study populations.

Negative beliefs in this study were found mainly for the following items: for item 8; most of respondents (92.4%) agreed that back trouble must be rested, which is strongly disapproved by management recommendations of staying active during an episode of LBP [1]. Our results are extremely similar to a study in Malawi in which 92.7% believed that people with LBP should avoid movement as it may cause more injury [21]. On the other hand, 18% of Australian women believed that LBP must be rested [22], and only 12% of Norwegian [23], and 35% of Belgium populations [24] believed that bed rest is the main stay of therapy, whereas 80% of New Zealand general population believed that if you have back pain you should stay active [17]. This difference could be because of cultural differences and absence or inappropriate health education in our community regarding physical activity and rest during an episode of LBP. Furthermore, 80.4% believed that back trouble gets progressively worse (item 9). In contrast, only 35.6%

agreed with the same sentence in the Australian women study [22], and 69.8% Malawi population [21].

About back pain and working; back trouble will eventually stop the person from working (item2) was supported by nearly two thirds (65.2%) of the participants. Likewise, 71.7% support the same belief in Malawi [21] but it was only supported by 16% in the Australian women study [22]. Back trouble means long periods of time off from work (item 6) was agreed by 58.6% compared with 9.7% in Australia [22]. These two items (item 2 and item 6) are related to item 3 (back trouble means period of pain for the rest of one's life) with 42.3% of the present sample agreed with. It refers to chronicity of pain; thus, work absenteeism and stop working due to pain.

Although Islam advice people to think positively [25], believing that good things will become true when you keep that in your mind, but poverty and poor socioeconomic status as well as sickness led to such hopeless ideas in our community. In the same context, slightly above half of the respondents (59.8%) believed that back trouble makes everything in life worse, compared with 32.4% in Australia [22]. However, 94.1% in New Zealand agreed that having back pain make it much difficult to enjoy life [17].

About prognosis; 45.6% agreed that back trouble may mean you end up in a wheelchair (item 5), compared with 11.5% in Australia [22], 26.8% in Malawi [21], and 12% of the Norwegians [23]. Similarly, 44% agreed that once you have had back trouble there is always a weakness (item 7). This belief is an important contributor to fear avoidance [26]. Therefore, it is needed to be discussed with patients having back pain. Similar percentages were found in studies in Australia (49.8%) [22], and New Zealand (51.8%) [17].

Although about half of the respondents thought the worse about back pain; just above two thirds of them (70.2%) disagree with first item (there is no real treatment for low back pain). According to Kroeger's socio-behavioral model [12] health seeking behavior was divided to five groups: 35% sought health care professional (modern healer) for their pain, 9.5% bought medicine from pharmacy, 20.5% sought traditional healers, 19.4% treated themselves, either by back plasters, ice or hot bags or any other treatment at home, while 37.1% did not do anything for their pain. So, the last two groups (56.5%) did not seek any help for their pain. These results slightly differs from Norway study in which 43 % sought health care practitioner, 8 % sought alternative health care and 49 % did not seek any kind of health care [27]. In an Australian study [28]; 51% consulted medical professional only, 44.2% consulted medical professional and alternative therapist, and only 2.8% did not seek care for their pain. The patients consulted modern healer 36% of them visited general practitioner, 43% visited orthopedic specialist while only 8% visited physiotherapist. In a study in Belgium, a general practitioner was consulted in 45.4% of the LBP cases, medical specialist by 28.6%, and physiotherapist by 16.9% [24]. In our study traditional healers was sought by 20.5% of back pain sufferers. It included massage, herbals, cautery, and cupping whereas in Qatar's study, 13.6% treated with cautery, but it did

not mention other kinds of traditional treatment [16]. In Australia, 26.5% went to massage therapist, 16.1% to chiropractic, 10% to herbalist, and 6% to acupuncture [27]. Differences in the above comparisons probably because the previous studies have chosen another model in care seeking behavior, or they study only one or two types.

In the present study, there was no association between LBP beliefs and age, gender, marital or work status. Association was significant regarding LBP beliefs and education, in which educated people were more pessimistic than non-educated. This may indicate that society and cultural beliefs are generally positive. However, Australian [4] and Malawian studies [21] revealed no association between beliefs and demographic characteristic.

There was no association between beliefs and the history of LBP. Similarly, studies in Canada [10], and France [20] reveal no relation between history of LBP and negative beliefs. In contrast New Zealand [17] and Australia [4] found that people with current back pain had more negative scores. Finally, there was no association between beliefs and type of care seeking for LBP pain in the current study. In contrast, a previous study in New Zealand [17] found that respondents had more positive views about activity if they had consulted a health professional about back pain. Similarly in Canada, seeking medical care was associated with less pessimism [10].

Unexpectedly, in the present study all patients had similar beliefs for both who consulted health professional or not. This is probably due to crowded doctor's clinics that lead to limited time spending with each patient. This highlights the importance of health education for patients, and the adherence to guidelines by physicians toward repelling negative beliefs about LBP. Literature found that negative beliefs regarding LBP originated from healthcare practitioners may be iatrogenic [26].

Study Limitation

The study included subjects who could attend the PHCC clinics in their catchment area, not as general population in Mukalla so that the majority of the sample were females. The study targeted all patients attending PHCC including those with or without LBP. However, care-seeking was measured only for patients with last year LBP. Finally, the study also didn't have data on pain severity and disability which might have relation with care-seeking as some other studies [10, 22] indicated.

Conclusion

The percentage of LBP is similar to the global figures. Beliefs about LBP measured using BBQ are normally distributed. The most negative items in the study population are items of rest when having back pain, worsening situation of patient's symptoms, and lack of ability to work. One third of the population sought appropriate care, while one third did nothing. Those who seek proper care from modern healers had no difference in their belief, as have been shown from other studies worldwide.

Declarations

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interest

The authors declare that they have no competing interests**.**

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Authors' contributions

Both authors participated in developing study hypothesis, objective and study design. FA performed statistical analysis, and formulated results. Both authors participated in the sequence alignment and drafted the manuscript. Both authors read and approved the final manuscript.

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