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Research Article

PSYCHOSOCIAL DETERMINANTS OF BACKACHE IN FEMALES

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Abstract:

Backache is subjective perception of pain in low back buttocks or legs. It is a frustrating cause of chronic physical impairment in females. Backache in females is a substantial problem.

***Objectives:** To identify the following psycho social factors associated with backache in females i.e. Pregnancy, Obesity, Aging, High heel shoes, Major Depressive Disorder, Malnutrition, Work overload (profession), Awkward working posture, Excessive household work, Unsuitable sleeping conditions, Sedentary lifestyle, Menopause, Domestic violence, Fibromyalgia Rheumatica, Somatization disorder, Oral contraceptives. This association between backache and these psychosocial determinants was found by a case control study in a period of 3 months (1st July to 30th September).*

***Design:** Population based Case Control study.*

***Place And Duration:** Urban Lahore from January 1st to March 31st 2017.*

***Subjects and Methods:** A population-based case-control study with 1:1 case to control ratio was conducted. A total of 100 persons (50 cases and 50 controls) were recruited in the study. Selection was made on laid down criteria from adult population living in Urban Lahore after taking due consent. Interviews were conducted through a pretested questionnaire by a group of trained medical doctors of the Department of Community Medicine, King Edward Medical University, Pakistan.*

***Results:** Our research included females of age group 18-55 years. It was found that backache is more in females above 36 years of age (65%) who were working women (60%) and married (61%). In Bivariate Analysis backache was found to be significantly associated with Major Depressive Disorder (OR:16.00, CI:3.483-73.408) Excessive household work (OR:14.462, CI: 3.972-52.656) Awkward working posture (OR: 7.319, CI: 3.025-17.705) Obesity (OR:6.143, CI: 2.323-16.242) Fibromyalgia Rheumatica (OR: 5.156, CI:1.86-16.3444) Somatization disorder (OR:5.505, CI: 1.460-20.755) High heel shoes (OR:5.412, CI: 1.660-17.646) Work overload (OR:4.472, CI: 1.355-14.755) Malnutrition (R:4.448, CI:1.675-11.811) Unstable Sleeping Conditions (OR:4.125 CI: 1.473-11.555) Pregnancy (OR: 3.841, CI: 1.610-9.161) Domestic Violence (OR: 3.019, CI: 1.315-6.929) Marital status (OR: 2.279, CI: 1.017-5.108). However in multivariate analysis while controlling all other risk factors; Major Depressive Disorder (OR: 20.891, CI: 2.07-2113.007) High heel shoes (OR:7.777, CI:1.28-466.376) and Fibromyalgia rheumatica (OR:4.757, CI:2.5-921.082) were found to be significantly associated with backache in females.*

***Conclusion:** Backache was significantly associated with Major Depressive Disorder, High heel shoes and Fibromyalgia Rheumatica.*

***Key words:** Psychosocial, determinants, backache, pregnancy, obesity, fibromyalgia rheumatica, depression.*

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INTRODUCTION:

Research orientation is defined as “one’s attitude or inclination to perform any systematic investigation to establish facts³.” The primary purpose for this applied research is discovering, interpreting, and the developing methods and systems for the advancement of human knowledge in a wide variety of scientific matters of our world.

Backache is subjective perception of pain in low back buttocks or legs. It is a frustrating cause of chronic physical impairment in Females. Backache in Females is a substantial problem. About half of women of all age groups complain of backache in PAKISTAN. Many women are helped by understanding the likely cause of pain and advice on prevention and management. Besides physical causes various psychological factors have been found to contribute in causation of backache in females. This study was designed to uncover the basic psychosocial factors causing backache in females.

There was a little data available on the existing situation of Psychosocial Determinants of backache in females in Pakistan. It was found in previous studies that high heel shoes³, pregnancy^{4,5}, obesity^{6,9}, old age^{10,11}, lack of exercise¹², low social support in the workplace¹³, low job satisfaction¹⁴ and poverty¹⁵ are associated with backache in females.

So there is a dire need to conduct a research study to find out the extent of backache in females and its psychosocial determinants. This research study was highly relevant, feasible and applicable to our community. It will help to find out various psychosocial risk factors associated with backache in females and preventive measures which can be adopted to prevent the problem.

SUBJECTS AND METHODS:

A case-control study was conducted to identify various psycho-social factors associated with backache in females in urban Lahore from January 1st to March 30th 2017. Total number of females were 100. The Study population was divided into 2 groups.

1. Case(Group 1)
2. Control(Group 2)

Group 1 included 50 females (n=50) who were suffering from backache. Group 2 also included 50 females (n=50) who were healthy. While a systematic random sampling approach was used to recruit study controls from all eligible controls. Written consent was obtained from all selected study subjects. Data was collected by interviews, conducted by a group of doctors in the department of community medicine, King Edward Medical University Lahore Pakistan; using pretested and close ended questionnaire, while keeping all ethical and social considerations in mind. Data entry and analysis was done by statistical software SPSS version 19. After describing the demographic characteristics using crosstables, simple and multivariate logistic regression was used to calculate odds ratio and their 95% confidence intervals.

RESULTS:

Among backache in females cases were mostly below 36 years of age (52%), married (54%), educated (88%) and pregnant (52%). In the control group, majority belonged to age below 36 years (74%), unmarried (66%), non-obese (86%) and non-pregnant (78%). See figures 1-5

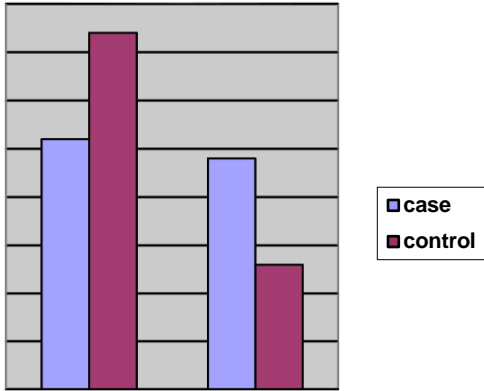


Figure 1. Age Distribution

Figure 3. Marital Status Distribution

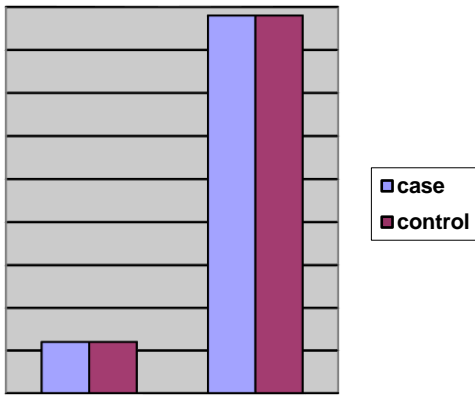
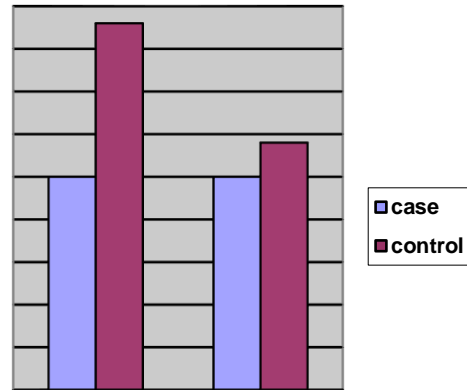


Figure 2. Education Distribution

Figure 4. Obesity Distribution

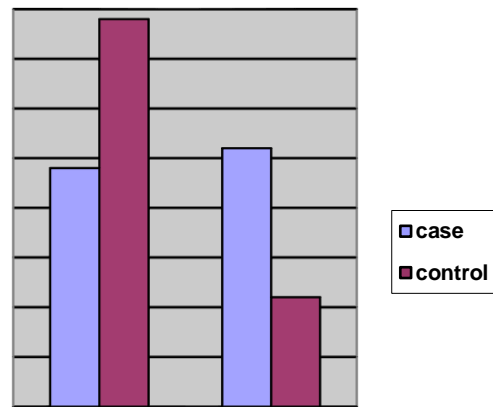
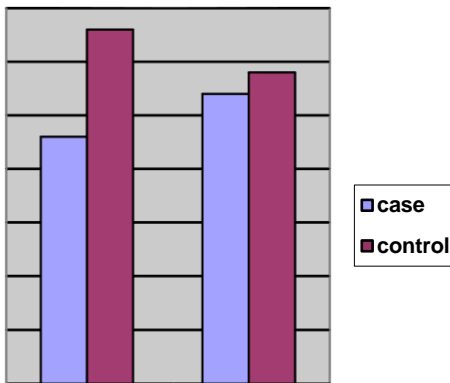


Figure 5. Pregnancy Distribution



In Bivariate Analysis backache was found to be significantly associated with Major Depressive Disorder (OR:16.00 ,CI:3.483-73.408) Excessive household work(OR:14.462 ,CI: 3.972-52.656) Awkward working posture(OR: 7.319, CI: 3.025-17.705) Obesity (OR:6.143, CI: 2.323-16.242) Fibromyalgia Rhuematica (OR: 5.516,CI:1.86-16.3444) Somatization disorder (OR:5.505,CI: 1.460-20.755) High heel shoes (OR:5.412,CI: 1.660-17.646) Work overload (OR:4.472,CI: 1.355-14.755)

Malnutrition (OR:4.448,CI:1.675-11.811) Unstable Sleeping Conditions (OR:4.125 CI: 1.473-11.555)Pregnancy (OR: 3.841 ,CI: 1.610-9.161) Domestic Voilence (OR: 3.019,CI: 1.315-6.929) Marital status (OR: 2.279,CI: 1.017-5.108).Whereas Education , Occupation , Income, Aging, Sedentary Life Style , Menopause and Oral-contraceptives were not significantly associated with backache. See table 1.

Table1: Association Of Psycho-social Factors with Backache In Females (Bivariate Analysis).

No.	Psychosocial factors	Self-medication		Bivariate analysis			Chi-square values
		Case n=50	Control n=50	Crude odd's ratio	95% CI		
					Lower	Upper	
1	Age	24	13	2.627	1.133	6.091	5.191
2	Education	44	44	1.000	0.299	3.341	0.000
3	Occupation	12	8	1.658	0.612	4.491	1.000
4	Income	13	8	1.845	0.689	4.941	1.507
5	Marital Status	27	17	2.279	1.017	5.108	4.058
6	Domestic Voilence	27	14	3.019	1.315	6.929	6.986
7	Pregnancy	26	11	3.841	1.610	9.161	9.653
8	Obesity	25	7	6.143	2.323	16.242	14.890
9	Aging	14	0	0.419	0.326	0.537	16.279
10	Malnutrition	21	7	4.448	1.675	11.811	9.722
11	Work Overload	14	4	4.472	1.355	14.755	6.775
12	Awkward Working Posture	37	14	7.319	3.025	17.705	21.168
13	Excessive Household Work	24	3	14.462	3.972	52.656	22.374
14	Fibromyalgia Rhuematica	19	5	5.516	1.862	16.344	10.746
15	Sedentary Lifestyle	18	14	1.446	0.621	3.368	0.735
16	Menopause	6	0	0.468	0.377	0.581	6.383
17	High heel shoes	16	4	5.412	1.660	17.646	9.000
18	Major Depressive Disorder	20	2	16.000	3.483	73.408	18.881
19	Unstable sleeping conditions	18	6	4.125	1.473	11.555	7.895
20	Somatization Disorder	13	3	5.505	1.460	20.755	7.440
21	Oral Contraceptives	9	5	1.976	0.612	6.380	1.329

Multivariate logistic regression model was used to control for possible confounding effect. It was observed that there were some changes between the crude odd's ratios and the adjusted odd's ratios. It was observed that after controlling for all the factors studied the strongest statistically significant association was exhibited by Major Depressive Disorder (OR: 20.891, CI: 2.07-2113.007) High heel

shoes (OR:7.777,CI:1.28-466.376) and Fibromyalgia rheumatica (OR:4.757 ,CI:2.5-921.082). Other not significantly associated factors included Awkward Working Posture, Excessive Household Work, Unsuitable sleeping conditions, Somatization Disorder and Oral Contraceptives. See table 2

Table 2. Association of Psycho-social Factors with Backache In Females (By Multivariate Analysis).

No.	Psychosocial factors	Self medication		Multivariate analysis		
		Case n=50	Control n=50	Adjusted odd's ratio	95% CI	
					Lower	Upper
1	Awkward Working Posture	37	14	1.346	0.000	
2	Excessive Household work	24	3	7.316	0.000	
3	Major Depressive Disorder	19	5	20.891	2.07	2113.007
4	High heel shoes	16	4	7.777	1.28	466.376
5	Fibromyalgia Rheumatica	20	2	4.757	2.5	921.082
6	Unsuitable Sleeping Conditions	18	6	6.747E8	0.000	
7	Somatization Disorder	13	3	0.110	0.001	12.174
8	Oral Contraceptives	9	5	0.199	0.012	3.170

DISCUSSION:

The psychosocial determinants have marked contribution in causing backache in females. These factors may co-exist with varying intensities in a single individual. Many psychosocial factors are associated with backache in females. Our study has shown that Major Depressive Disorder^{1,2}, Fibromyalgia Rheumatica^{3,4}, Excessive Household Work^{5,6}, High heel shoes⁷, Lack of Exercise⁸, Awkward working Posture⁹, Unsuitable Sleeping Conditions^{10,11}, Somatization Disorder¹², Domestic Violence¹³, Work Overload¹⁴, Malnutrition¹⁵, Marital Status^{16,17} have been associated with back ache in women. Furthermore, our study revealed that Pregnancy¹⁸, Obesity¹⁹ also predispose to lack of research orientation which is consistent with current body of knowledge, i.e., previous studies. There was little data available on the existing situation of backache in females in Pakistan's found in previous studies. It was found in previous studies that high heel shoes^{20, 21}, pregnancy^{22,23}, obesity²⁴, old age²⁵, lack of exercise²⁶, Low social support in workplace²⁷, low job satisfaction^{28,29} and poverty³⁰ are associated with backache in females.

In contrast to previous researches, our study does not depict any association between Old age³¹, Poverty³², low workplace social support³³ and low job satisfaction³⁴ and backache in women. Also, use of alcohol and tobacco³⁵ and use of IUCDs³⁶ are not found to be associated with backache in female sin our study, though proved by other studies.

Our study has also revealed that Domestic Violence¹³, Excessive household work³⁷, Unsuitable Sleeping conditions^{10,11}, Malnutrition¹⁵ and Marital Status^{16,17} are associated with back ache in females. Since no

such association have been found in previous studies, these variables are suggestive of causing back ache in females for the first time.

CONCLUSION:

Among backache in females cases were mostly below 36 years of age, married, educated and pregnant. Psychosocial Determinants of backche in females identified include Major Depressive Disorder, Fibromyalgia rheumatica, Awkward working posture, High heels, Unstable sleeping conditions, Somatization disorder, Obesity, Domestic violence, Work overload, Malnutrition, Excessive household work, Pregnancy, and Marital status.

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