

# Impact of Low Back Ache on Quality Of Life In Subjects With Leucorrhoea

Hina Gupta<sup>1</sup> & Uzma Sayyad<sup>2</sup>

<sup>1</sup>Lecturer, Department of Physiotherapy, Teerthanker Mahaveer University, India.

<sup>2</sup>Department of Physiotherapy, Teerthanker Mahaveer University, India.

## Abstract:

**Background:** Leucorrhoea is a disorder characterized by abnormal discharge per vaginum. Low back ache associated with it is one of the major cause for patient visits to tertiary healthcare centers.

**Objective:** To identify percentage and grade severity of disability caused by LBP in females with leucorrhoea using NPRS & ODI version (2.2).

**Methods:** Overall 149 females consented to participate in the study and filled NPRS & ODI version (2.2).

**Data Analysis:** Disability Score was calculated and later Samples were stratified on the basis of ODI scores for percentage of females suffering to what extent of disability. Correlations were established between duration of disease, Duration of low back pain & ODI Score using Pearson's Correlation coefficient( $r$ ) at  $p < 0.01$ .

**Results:** Out of 149 samples; 11% had mild disability; 57% had moderate disability; 22% had severe disability; 10.6% were crippled and 2% were bed ridden. Positive correlations were found between NPRS and ODI score & Duration of disease and low back pain at ( $p < 0.01$ ).

**Conclusion:** Majority subjects suffered from mild to moderate disability. Duration of disease has a significant impact on severity of disease and disability caused by it.

## 1. Introduction

Vaginal discharge or leucorrhoea is a common gynaecological problem faced by women but it may or may not be associated with vaginal infection or due to elevated estrogen levels at the time of ovulation<sup>[1, 2]</sup>. Incidence of leucorrhoea was found to be very high in developing countries.<sup>[3, 4]</sup>

It is a common complaint of many women visiting tertiary health care centers as reflected in a study where prevalence of leucorrhoea amongst 1100 females visiting OPD was about 24.6%, i.e., 271 out of 1100 patients.<sup>[5]</sup> Whereas, another study stated that leucorrhoea was prevalent amongst 75.4% from 500 women being studied for that respective study.<sup>[18]</sup> It is found more prevalent amongst females of age group 25-34 years.<sup>2</sup>

Factors contributing to leucorrhoea are chronic illness, exhaustion, malnutrition, emotional disturbances, unhygienic condition, improper diet, constipation and chronic retroverted uterus.<sup>[4]</sup> An array of other conditions may cause leucorrhoea along with psychosexual problems and depression.<sup>[6-8]</sup>

Women with leucorrhoea experience low back ache, itching and burning sensation of vulva, poor appetite, discomfort, general weakness, lower limb pain, fatigue due to malnutrition, sleeplessness, lack of hygiene, poverty and low social values, during pregnancy before, after and during the menstrual cycle.

A study reported that backache was reported as the commonest presenting feature of leucorrhoea amongst the women of rural North India, followed by weakness, pallor, poor vision, body ache, giddiness urinary problems and others.<sup>[9]</sup> It also effects efficiency of women in the working section of the society.<sup>[4]</sup> It is one of the common cause of both short-term and long-term sickness absence of females.<sup>[10]</sup> LBP can be attributed to either mechanical or non-mechanical causes or referred pain from visceral organ. It often leads to job dissatisfaction, decreased work efficiency, low control over work, psychological distress, lack of recognition and respect, limited decision making authority.<sup>[11, 18]</sup>

Previous studies and measures have attempted to depict the various causes for leucorrhoea, but none has been able to explain the duration-based activity-limitations. Henceforth, there is a need to study the relation between pain and disability caused by low back pain in subjects with leucorrhoea.

## 2. Methodology

### 2.1 Inclusion criteria

Females of all ages suffering from leucorrhoea associated with low back pain and had no previous history of low back pain and musculoskeletal disorders before onset of leucorrhoea symptoms.

### 2.2 Exclusion criteria

Females suffering from radiating low back pain without leucorrhoea or had any clinically diagnosed musculoskeletal disorders prior or later to the onset of leucorrhoea.

### 2.3 Measuring tools

Oswestry's Disability Index (ODI) and Numeric pain rating scale (NPRS) has been used to evaluate pain and its resultant disability in various mechanical and non-mechanical disorders. [6, 12, 13, 16, 17] In this study ODI and NPRS are used to evaluate the impact of the Low back pain attributed to leucorrhoea and its impact on the performance, resultant disability and the impact on their daily livelihood of females [14, 15].

### 2.4 Procedure

250 Female subjects suffering from leucorrhoea associated low back pain were approached; amongst which only 149 females consented to participate in study. Further, NPRS and Oswestry Disability Index 2.2 was filled by the subject. However, for illiterate subject the index was translated and filled by the assessor on their behalf. Later, disability score of each subject was calculated by summing up scores from all constructs of scale and percentage of disability was calculated.

### 3. Data analysis

149 samples were analysed, percentage of subjects classified on the basis of ODI percentage disability. Descriptive statistics based on age was established along with Pearson's correlation coefficient( $r$ ) between NPRS Score & ODI score and duration of disease and low back ache at ( $p <= 0.01$ ). Data was tabulated in Microsoft Excel and IBMSPSS version 20.0 for correlation and frequencies.

### 4. Results

**Table 1** reflects Descriptive Statistics of subjects i.e. total number of subjects (N) which was 149, having a minimum age of 17 and a maximum age of 49 with an Oswestry Disability Index score minimum of 8 and maximum of 88.

**Table 1**

Descriptive Statistics					
	N	Min.	Max.	Mean	Std. Deviation
Age	149	17.00	49.00	25.9	7.2
ODI Disability	149	8.00	88.00	37.71	15.9
Valid N (list wise)	149				

**Table 2** reflects frequency, percentage and age group of subjects stratified on the basis of their ODI score

**Table 2**

	Frequency	Percentage	Age
0-20% (Minimal Disability)	13	8.72	17-30
20-40% (Moderate Disability)	85	57.04	17-45
40-60% (Severe Disability)	34	22.81	17-49
60-80% (Crippled)	14	9.39	17-45
80-100% (Bed Ridden)	4	2.68	20-45

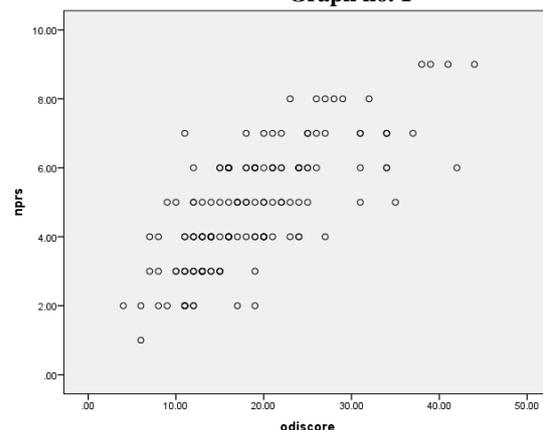
**Table no 3 (Graph no.1):** Shows strong positive linear correlation ( $r=0.736$ ) between the Numeric Pain Rating Scale score and Oswestry Disability Index score. Henceforth, this value suggests that an increase in NPRS scores lead to an increase in ODI score suggesting a direct, but not proportionate relationship between the two values.

**Table 3**

Pearsons Correlations coefficient			
		NPRS Score	ODI Score
NPRS Score	Pearson Correlation	1	.736**
	Sig. (2-tailed)		.000
	N	149	149
ODI Score	Pearson Correlation	.736**	1
	Sig. (2-tailed)	.000	
	N	149	149

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Graph no. 1**



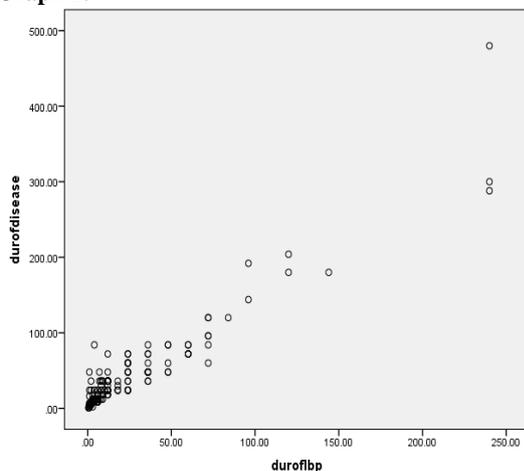
**Table 4: (Graph 2)** Shows that there is a strong positive linear correlation between the duration of disease and the duration of low back pain with  $r=0.943$ . This is indicative of the fact that as the disease progresses the associated low back pain duration increases.

**Table 4**

Pearsons Correlations coefficient			
		Duration of disease	Duration of low back pain
Duration of disease	Pearson Correlation	1	.943**
	Sig. (2-tailed)		.000
	N	149	149
Duration of low back pain	Pearson Correlation	.943**	1
	Sig. (2-tailed)	.000	
	N	149	149

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Graph 2:**



## 5. Discussion

The study was aimed at the acknowledgement of the impact of leucorrhoea associated low back pain on the livelihood of the subjects. There is lack of evidence who evaluate the musculoskeletal problems and disability associated with leucorrhoea or other gynecological disorders.

Leucorrhoea is one of the commonest problems faced by the female population.<sup>1</sup> AJ Singh reported that it is almost invariably associated with presence of a debilitating low back pain and it often leads to psychological stress amongst the patients.<sup>9</sup>

According to Tabassum K et al. back pain associated with leucorrhoea is invariably higher in reproductive age of 25-34 years of age with a frequency percentage of 47.33%, although the cause could not be effectively reported.<sup>4</sup> In support of their results, we too found that the maximum number of subjects i.e. 85 subjects suffered from both leucorrhoea and low back pain within the age group of 21-30 yrs. This is indicative of the higher prevalence of leucorrhoea and its associated back pain in the reproductive years. In contrary, Sampda Shivdas Rajurkar et al. declared that the disease has no

association with marital status, sexual activity and literacy.<sup>17</sup>

Somia Gul et al. deduced that systemic toxicity, poor nutrition and less water intake in relation to excessive vaginal discharges can be attributed to unhealthy lifestyle and decreased immunity.<sup>8</sup> However, we did not consider marital status or sexual activity or perineal hygiene. Perhaps, these factors can be assessed for future studies using the original ODI version.

Low back pain, especially in women, is a major cause of work absenteeism.<sup>10</sup> During the course of this study, it was observed that leucorrhoea associated back pain is prevalent amongst both working as well as home bound women. Women with severe disability and above (>40% disability by ODI) accounted for a considerable part i.e. 51 subjects of the total population being addressed. This further emphasizes that leucorrhoea associated back pain can lead to reduced efficiency at work and home.

The Oswestry Disability Index and Numeric Pain Rating Scale have been used to facilitate a better understanding of the back pain and its resultant disability. The frequency distribution on the basis of ODI score has made it understandable of the extent of the disability associated with the disease. The ODI is a measuring tool for disability; however, the NPRS is tool for scaling of pain. Therefore, a correlation between these two values obtained,  $r=0.736$ , ( $p<=0.01$ ) which is indicative of a positive correlation between the two and is inferential of a strong positive direct relationship between pain and disability.

Another correlation between the duration of leucorrhoea and the duration of low back pain,  $r=0.943$  ( $p<=0.01$ ). This suggests that the extent of low back pain is directly proportional to the duration of leucorrhoea.

At the end, above mentioned correlations and frequency distributions indicate that the disability induced as a result of leucorrhoea associated with low back pain is profound in nature and requires extensive work for its mitigation and regulation.

Future studies are recommended focusing on effect of diet, water consumption and sexual activeness on disease course and disability induced by it. Relationship between duration of leucorrhoea and low back pain can be studied which may be helpful to study the effect of remedial intervention and its effect on low back pain.

## 6. Conclusion

This study concludes that females have mild to moderate disability who suffer from leucorrhoea which further has a detrimental effect on their functional abilities. Further we also conclude that the intensity of pain is directly proportional to the level

of disability. Additionally, longer the duration of disease, the person is more likely to suffer from higher intensity of low back pain.

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