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Effectiveness of an Educational Booklet for the Management of Patients with Chronic Low Back Pain

Md. Atikul Aziz*[1], Shahadat Hossain[2], Hashina Bilkish Banu[3], Monzur Ahmed[4], Shohag Chakrabarty[5], A.S.M. Minhaj Uddin[6]

Abstract

Introduction: *The aim of the present study was to assess the effectiveness of provision of an educational booklet for the management of patients with chronic low back pain.* ***Materials and Methods:*** *A Randomized controlled clinical trial was conducted from January 2018 to June 2018 among 80 patients attending at Physical Medicine and Rehabilitation outpatient department of the Shaheed Suhrawardy Medical College and Hospital after obtaining requisite consent from the patients. 80 Patients were divided into two groups (Group A and Group B). Group A contains Patients educational booklet group + exercises + analgesics (Case group). Group B contains Physicians advice only group + exercises + analgesics (control group). Data were collected through interviewing and examining of the patients. The collected data were entered into the computer and analyzed by using SPSS (version 20.1) to assess the effectiveness of provision of an educational booklet for the management of patients with chronic low back pain. The study was approved by the institutional ethical committee.* ***Results:*** *In a pool of 80 patients, the range of age was 18-55 years in case group and control group. There was no significant difference found in age between case and control group (p value is 0.383). Among the patients of case group 28 (70.0%) were male and 12 (30.0%) were female. Among the patients of control group 17 (42.5%) were male and 23 (57.5%) were female. Visual analogue score (VAS) score of group A patient was 5.4±1.0 and group B was 5.7±1.1 (p=0.143). At the first follow up the mean VAS score of group A was 4.5±1.0 and group B was 4.8±0.9 (p=0.111). At the second follow up the mean VAS score of group A was 3.1±0.9 and group B was 3.5±0.8 (p=0.077). And at the final (third) follow up the mean VAS score of group A was1.9±0.8 and group B was 2.4±0.6 (p=0.002).* ***Conclusion:*** *There was significant improvement of pain of case group than control group. At the end of study we can tell that, educational booklet is effective for the management of patients with chronic low back pain.*

Keywords: *Educational booklet, chronic low back pain.*

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***1. Corresponding Author:**

Dr. Md. Atikul Aziz
Junior Consultant
Department of Physical Medicine and Rehabilitation
National Institute of Neurosciences and Hospital
Sher –E- Bangla Nagar
Dhaka, Bangladesh.
Email: atikulaziz85@gmail.com
Mobile: 01716298786

2. Prof. Dr. Shahadat Hossain
Director
Management Information System (MIS)
Directorate General of Health Services (DGHS)
Dhaka, Bangladesh.

3. Dr. Hashina Bilkish Banu
Associate Professor
Department of Physical Medicine and Rehabilitation
Shaheed Suhrawardy Medical College and Hospital (ShSMC)
Dhaka, Bangladesh.

4. Dr. Monzur Ahmed
Associate Professor
Department of Physical Medicine and Rehabilitation
Shaheed Suhrawardy Medical College and Hospital (ShSMC)
Dhaka, Bangladesh.

5. Dr. Shohag Chakrabarty
Junior Consultant
General Hospital
Cumilla, Bangladesh.

6. Dr. A.S.M. Minhaj Uddin
Ragistrar
Department of Physical Medicine and Rehabilitation
Shaheed Suhrawardy Medical College and Hospital (ShSMC)
Dhaka, Bangladesh.

Introduction:

Chronic nonspecific low back pain (i.e, low back pain of at least 12 weeks' duration and without a specific cause) is one of the most common health conditions worldwide[1]. Chronic low back pain is highly associated with disability, emotional changes[2] and work

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absenteeism[3]. Worldwide, 65–80% of the population experience low back pain at some stage of their lives[4]. The majority of low back pain is non-specific and has no clear diagnostic, prognostic or treatment protocols[5]. Chronic low back pain is resistant to treatment, and patients are often referred for multidisciplinary treatment[6]. For patients with chronic back pain there are many therapeutic interventions available, but none seems to be better than the others[7]. Manual therapy, specific exercise training and targeted education all seem to promote therapeutic success through targeting distinct aspects of chronic low back pain[8]. Patient education has been a prominent part of the care of low back pain (LBP) for the past two decades based on the belief that recovery from LBP can be enhanced if those who experience it better understand the nature of their problem(s)[9]. Three book types are in common use, labeled here as 1) traditional biomechanical, 2) evidence based and 3) individualized biomechanical. Historically, the majority of educational booklets have taken a "traditional biomedical" approach, including a basic overview of spinal anatomy, explanations of various (established and unestablished) mechanisms and anatomic sources of pain, many recommending the avoidance of pain, even bed rest, and/or use of exercise for aerobic benefit or to strengthen trunk musculature after pain has subsided[10]. A combination of booklet and individual advice is believed to have many advantages: patients may become more aware of treatment options and make the most of consultation. Usually, they also are able to recall the verbal advice better[11]. It also emphasizes that one should get back to normal activities, including returning to work, as soon as possible[11]. As the booklet is easy to deliver, inexpensive, and innocuous,[12] it has become widely used and is considered to be feasible also in the treatment and promotion of self-care among LBP patients[13].

Materials and Methods:

A Randomized controlled clinical trial was conducted from January 2018 to June 2018 among 80 patients attending at Physical Medicine and Rehabilitation outpatient department of the Shaheed Suhrawardy Medical College and Hospital after obtaining requisite consent from the patients. 80 Patients were divided into two groups (Group A and Group B). Immediately after the selection, the studied patients were randomized by drawing lottery and allocated one of the two groups. Each patient was an equal chance of being allocated to any one of the assigned group. Group A contains Patients educational booklet group + exercises + analgesics (Case group). Group B contains Physicians advice only group + exercises + analgesics (control group). Data were collected through interviewing and examining of the patients. The collected data were entered into the computer and analyzed by using SPSS (version 20.1) to assess the effectiveness of provision of an educational booklet for the management of patients with chronic low back pain. The study was approved by the institutional ethical committee. The interviews were held directly in the corridor just outside the Outpatient Department.

Result:

The table shows that the mean±SD age of case group was 35.28±6.10 and control group 35.75±6.68. The range of age was 18-55 years in case group and control group. There was no significant difference found in age between case and control group (p value is 0.383) (Table I).

Table I: Age distribution of the study population (n=80)

Age in years	Group A (n=40)	Group B (n=40)
18-25 years	10 (25.0%)	8 (20.0%)
26-34 years	12 (30.0%)	15 (37.5%)
35 years and above	18 (45.0%)	17 (42.5%)
Mean age	30.7±6.1	31.8±6.9

***P value 0.401**

*chi square test &t test

**Significance=p<0.05

The figure shows that among the patients of case group 28 (70.0%) were male and 12 (30.0%) were female (Figure 1).

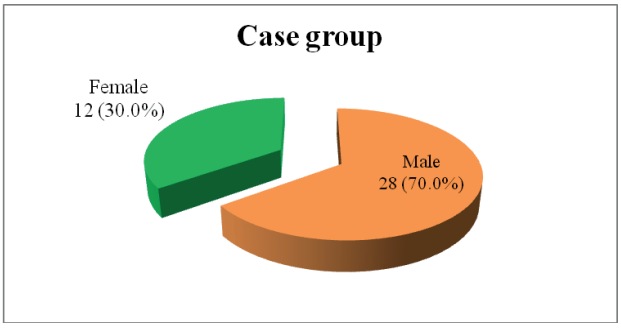

Figure 1: Pie Chart Showing Sex distribution of case group

The figure shows that among the patients of control group 17 (42.5%) were male and 23 (57.5%) were female (Figure 2).

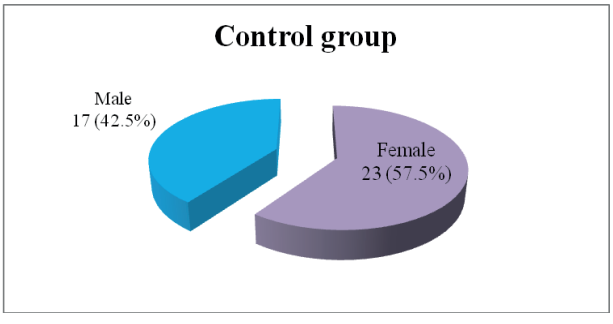

Figure 2: Pie Chart Showing Sex distribution of control group

The table shows that at the baseline visit the mean ODI (Oswestry disability index) score of group A patient was 15.5±2.5 and group B was 15.7±2.4 (p=0.619). At the first follow up the mean ODI score of group A was 14.1±2.0 and group B was 14.4±1.8 (p=0.554). At the second follow up the mean ODI score of group A was 11.0±2.2 and group B was 11.7±2.0 (p=0.148). And at the final (third) follow up the mean ODI score of group A was

7.9±2.1 and group B was 8.8±2.0 (p=0.060). There was no significance difference between case and control group (Table II).

Table II: Oswestry disability index score among the study patients (N=80)

Oswestry disability index score	Group A (Mean±SD)	Group B (Mean±SD)	P value
Baseline	15.5±2.5	15.7±2.4	0.619
1st follow up	14.1±2.0	14.4±1.8	0.554
2nd follow up	11.0±2.2	11.7±2.0	0.148
3rd follow up	7.9±2.1	8.8±2.0	0.060

*t test= Independent Samples t-test

**Significance=p<0.05

The table show that at the baseline visit the mean VAS (**Visual analogue scale**) score of group A patient was 5.4±1.0 and group B was 5.7±1.1 (p=0.143). At the first follow up the mean VAS score of group A was 4.5±1.0 and group B was 4.8±0.9 (p=0.111). At the second follow up the mean VAS score of group A was 3.1±0.9 and group B was 3.5±0.8 (p=0.077). And at the final (third) follow up the mean VAS score of group A was1.9±0.8 and group B was 2.4±0.6 (p=0.002). There was significance difference between case and control group (Table III).

Table III: Visual analogue scale score among the study patients (n=80)

Visual analogue scale score	Group A (Mean±SD)	Group B (Mean±SD)	P value
Baseline	5.4±1.0	5.7±1.1	0.143
1st follow up	4.5±1.0	4.8±0.9	0.111
2nd follow up	3.1±0.9	3.5±0.8	0.077
3rd follow up	1.9±0.8	2.4±0.6	0.002

*t test= Independent Samples t-test

**Significance=p<0.05

Discussion:

As in the result of our study, we can see that the main outcome of the study variables suggest that our educational booklet played a significant role to reduce pain and disability. Educational booklet is one of the important instruments of the patient's health education which guided them always in their daily life. In a comprehensive review of health education methods Gatherer and colleagues[14] commented that 'written instructions appear to be inferior to most other sorts of instruction' They suggested that written material often produced limited change in patients' knowledge or behavior and that effects which had been demonstrated were often short lived. However, most studies of health education leaflets have been on unsolicited material sent to patients. One might expect that written material given to an individual patient by his or her general practitioner would be more effective. There have been four previous controlled trials of health education booklets in general practice. In a trial of a booklet giving instructions about the management of minor illness, Anderson and colleagues[15] showed that the receipt of the booklet was associated with a reduction in consultations for symptoms described in the booklet. There was, however, no detectable increase in knowledge about minor illness among patients receiving the booklet. In the second trial, which was of a booklet for patients with hypertension, receipt of the booklet was associated with a small increase in understanding about hypertension, but not with improved blood pressure control[16]. In the third trial, a booklet on smoking was coupled with a warning about follow up by the general practitioner, and this combination was associated with a significant increase in the proportion of patients who stopped smoking[17]. In the fourth trial, the Back book appeared acceptable to patients, and indeed it was remarkable that more than two thirds of respondents claimed that they still had their booklet one year after they had been given it by their general practitioner. No formal analysis was carried out of the acceptability of the booklet to the doctors, but comments were almost universally favorable. When consultations with the general practitioner for back pain were analyzed, it was found that the booklet had a different effect at different times of the study year. However, the booklet had no effect on absence from work owing to back pain. This suggests that the observed reduction in consultations for back pain in the booklet group may have been in patients whose back pain was relatively less disabling[18]. In the present study between the two outcome measures one was reached and another differences was almost reached the statistical significance at the 5% level. When the sample size of 80 patients was chosen for this study, it was accepted that this would not be sufficient to detect reliably an effect of the booklet. But the results of this study demonstrate that an educational booklet is a useful resource for the patients and also for the general practitioner in his management of patients with back pain. The booklet was valued both by doctors and by patients. Receipt of the booklet was associated with a small reduction in the number of patients consulting with back pain and an increase in patients' knowledge about back pain.

Conclusion:

The educational booklet provided reassurance about the natural history of low back pain coupled with clear instructions on pain management. This information could have enhanced patients' perception of LBP as a symptom that could be managed without professional help, and reduced the demands of some patients for something to be done. A larger study is needed to explore these hypotheses further. In the test of knowledge about LBP, patients in the booklet group scored significantly higher than control group.

Conflict of Interest: None.

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