



Back School and Education

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Abstract

The increased interest in patient education has paralleled the rise of consumer advocacy. The idea of back school seems a simple enough concept. The back school is an educational facility correcting misinformation, teaching anatomy, pathophysiology and body mechanics to eliminate groundless apprehension. Still, education and practical advice have been part of good back pain management for years and have failed to stem the growing tide of concern about the “bad back”. Why is back school so different from a simple training program conducted by physicians and physical therapists within their own practices? The latter address immediate and practical needs of the individual, a necessary and worthwhile objective, but a school for back education should imply far more.

Introduction

Twenty years ago, there were few organized back schools. In Sweden, the program originating at the Danderyd Hospital in 1970 became the basis for several hundred similar back schools throughout that country. These programs, conducted by a physical therapist, consisted of four 45-minute lessons over a two-week period. Classes contained six to eight people. The program emphasized spinal anatomy and the elimination of mechanical stress on the back. Two classes were practical sessions designed to improve back care techniques and encourage the students to increase their level of physical activity. There was no specific exercise training.

In 1974, a back education unit was created at a small hospital in Toronto Canada. The program began as a two-lecture series on the cause and physical treatment of low back pain. These classes were organized to eliminate the need for repetitive educational sessions in the private office. The inclusion of a physical therapist broadened the information base. Typical of the early efforts in back education, this program was viewed as an isolated event with no consideration for repeat classes, follow-up assessment or outcome measure.

The effect of the school approach, however, was greater than anticipated. Patients rapidly developed patterns of group interaction that amplified and reinforced the information. Questions were asked and topics discussed that have never arisen in private practice counselling. The classroom setting reduced the inhibition present in the doctor's office and patients were now anxious to express views and concerns they had previously suppressed. The presence of more than one authority figure, each with a different professional background, but with a similar point of view, strengthened the validity of the message. The Toronto experience was typical of many of the early attempts in back education. Within a year, the initial two-lecture program had expanded to a regular series of four 60-minute lectures involving not only the physician and physical therapists, but a psychologist as well. Emphasis shifted from the traditional ergonomic approach typical of most physical therapy training programs to a more motivational style focusing on the elimination of fear and promoting confidence in the back's natural capacity for recovery. A class size between 10 and 15 students encouraged active participation and made cost efficient use of the instructor's time. This primitive program evolved into the Canadian Back Education Units, an educational network which would eventually supply teaching material to over 20 locations in Canada, the United States, and as far away as India and Australia.

In 1976, the California Back School came into existence. The approach focused more on physical training and ergonomic assessment. Students were treated individually in three weekly 90-minute sessions and were observed in work simulation. A review session four weeks after discharge tested both physical capacity and cognitive knowledge.

These early schools were rapidly copied. Within a decade, there were over 2,000 patient education programs in North America designated as 'back school'. The trend has continued to the present. This proliferation of programs in recent years is a cause of some concern. The wide range of formats and differences in approach make a valid comparison almost impossible. Even the generic title, "back school" has come to hold little meaning. While patient education as a general principle is hard to refute, the specifics are open to criticism. As the cost of back education increases, there is a greater need to accurately ascertain its value. The assessment must be considered in terms of defined parameters to measure the impact of comparable programs on the comparable patient populations.

Patient Selection

Age

Educational programs must be tailored to the age of the students. Back care programs have been attempted in the public school system with limited success. Inadequate time within the curriculum, a shortage of teachers comfortable with the subject matter, and a lack of motivation in young student population who have no fear of nor interest in back pain are given as reasons for a poor response. Classes for the elderly in hospitals and nursing homes confront a group with a greater percentage of specific non-mechanical back problems. This group is poorly served by routine lectures on safe lifting or abdominal strengthening.

Sex

The incidence of back pain is approximately the same for men and women. The presentation, however, must have regard for the sex of the audience. Pictures depicting the proper way to stand at an ironing board will not have the desired impact on a group of blue collar foundry workers.

Workers' Compensation

Dissatisfaction concerning occupation, place of employment and the monotony of the work performed have all been associated with an increase incidence of low back pain. Groups comprised entirely of injured workers can generate disruptive amounts of hostility. If the back education process is seen as a tool of the compensation board or of the employer, there may be immediate resentment and suspicion of any message that advocates a rapid return to work regardless of the medical validity of the advice. The inclusion of non-compensation patients in the student group introduces an element of peer pressure to improve performance which may be the only positive motivation the class receives.

Litigation and Insurance Claims

The possible role of secondary gain and increased focus on pain behaviour are factors to be considered in this group. A direct and open discussion of these topics in a small group setting can sometimes convey a message to the individual that would be impossible to deliver in direct confrontation. Information about chronic pain and its real effect on performance can be delivered in a lecture without arousing these defence mechanisms in an individual patient.

Pain Type

No Pain

Industry has attempted preventative back education for many years, but work site education through posters and the compilation of safety records has had little effect. Such passive measures have not decreased the incidence of industrial low back claims, nor even altered the workers' attitude toward the problem. Most uninjured workers view back pain as someone else's problem. While, there has been a general acceptance of ergonomic standards, there has been little gain in the understanding of back problems. The motivation to learn is low. Because alternative back-sparing methods often require more energy than conventional activities, workers tend to choose the easy way. An active education program generally produces a transient effect; long-term impact requires corporate commitment.

Minor, Acute, Intermittent Back Pain

Following a single, short duration attack, patients are rarely motivated to participate in an extensive training routine. The majority of these patients do well with any form of treatment. Because of the rapid spontaneous remission, these patients probably form the majority of the group which responds so dramatically to passive modalities and fringe therapy. For the same reason, it is difficult to assess the value of back school to these people.

Chronic Back Pain

Back school has its greatest role in improving the outcome of chronic back pain management. They are often the victims of unnecessary fear that can be overcome when they discover how to modify and control their own pain. Working with this group, back school stresses the benign nature of back pain and places responsibility for rehabilitation with the individual. Because extended periods of pain are often associated with extended periods of physical inactivity, back education is best combined with a progressive exercise and reconditioning routine.

Chronic Pain Syndrome

The chronic pain syndrome requires intensive, multidisciplinary management. This syndrome is separated from chronic back pain by the predominance of the accompanying behavioural disorder. Patients exhibit a marked preoccupation with their symptoms which has become the dominant factor in their lives. Many back schools use some psychological techniques, but the operant conditioning of a chronic pain program lies beyond the scope of most back education courses. Treating an established chronic pain syndrome with back school alone is an inappropriate use of the technique.

Class Size

Individual

Individual patient education in an office or clinic is the forerunner of most back schools. It is rarely, if ever, cost effective. When education is combined with physical training or the use of direct investigative or pain-relieving procedures, the one-on-one approach may be considered back school but the method is labor-intensive and expensive.

Small Group

The small group format allows patients to share their feelings, fears, and experiences with others. Groups of 10 to 20 people permit an informal approach where lectures become conversations, albeit with clearly defined guidelines. Problem patients can be isolated and their disruptive influence minimized. Group dynamics often reinforce the cognitive message.

Large Group

Significantly increasing the size of the back school class may interfere with the exchange of information. Patients are reluctant to speak out in front of a larger group. The bigger audience requires a higher degree of expertise in the lecturer and greater sophistication in the instructional aids. Points of detail, interesting in a small group, appear out of place in a large class. The air of informality disappears and the physician or physical therapist is once viewed only as an authority figure, not as a knowledgeable participant in an open discussion. The sense of peer pressure, competition and feedback are diminished.

Didactic Lecture

The purpose of the didactic lecture is to provide information and to motivate. There is limited opportunity for interaction between the instructor and the students. Patients who attend receive no individual attention. Because of the sense of isolation which affects so many chronic back pain sufferers, the majority of the audience may view the performance as something that applies to situations other than their own.

Primary Emphasis

Ergonomic

Evidence supports a strong relationship between mechanical stress and low back pain. As a natural outgrowth of physical therapy programs, most early back schools stressed body mechanics. Considerable emphasis was placed on proper sitting and standing, as well as on the correct techniques for lifting and carrying. Although the educational scope has expanded, many instructors still consider disseminating this ergonomic information their principle objective. Unfortunately, the biochemical evidence supporting the various "correct" techniques is constantly changing. As a major source of patient information, back schools has an obligation to continually upgrade its material and keep its message in line with the current state of knowledge. This may prove difficult both logistically in the provision of new teaching aids and psychologically in the re-education of staff convinced of the value of the established methods.

Psychological

Information about the benign nature of mechanical back pain helps dispel myths, allay fears, and minimize the patient's natural preoccupation with his or her symptoms. Because emphasis is placed on a basic understanding of spinal anatomy and the recognized sources of back pain, there is less demand with this approach to constantly revise the information. The philosophy promotes self-help and experimentation as methods of coping with the changing rules of proper back care.

Back Exercise

Current studies suggest that the strength of trunk extensors is often reduced in patients with chronic back complaints, and that diminished muscle endurance is a contributing factor. As with ergonomic considerations, the biochemical theories used to advocate one approach to exercise in preference to another are constantly changing. Abdominal strengthening has been supplanted in many clinics by an emphasis on back extension. But an exercise-oriented back school should not simply be an elaborate physical therapy session nor a fitness club for back patients. Neither of these alternatives provides the continuing educational input and psychological support of the legitimate back school.

Frequency Of Treatment

Single session

There is no justification for labelling a single instructional session as a back school. The industrial application of back education often demands time constraints dictated by production quotas or shift schedules, and convincing management of the value of an on-going educational program can be difficult. But since the goal of any valid educational effort is a change in observed behavior, compression of the format into a single session is always ineffective.

Multiple Sessions

The optimum amount of instruction necessary for the individual back school student has yet to be determined. Estimates range from as little as three to more than 12 hours. The longer courses tend to focus on the more difficult chronic pain patients or to combine education with ergonomic and exercise training. Most back schools run between two and four classes for each patient ranging from 30 to 120 minutes in length.

Treatment Type And Intensity

Education Only

The teaching, learning and retention of information about spinal anatomy, the causes of back pain, the psychological implications of a bad back, proper back care and remedial exercise are generally the basis for the designation "back school". It is hoped that patient education will lead to a willingness to accept responsibility and to active participation in the recovery process. Implicit in this approach is the belief that greater understanding by the patient will lead to greater self-control of the problem. This seemingly self-evident proposition has, in fact, rarely been tested. Its acceptance lies in the broader acceptance within our society of education as a means of improving performance.

Treatment Only

The hospital-based back school has been regarded by some critics as primarily a means of directing patients to other, more invasive forms of conservative back pain management. Individual assessment is paramount and the "school" aspect may be little more than the cursory dissemination of back care instruction. The name "back school" may bear little relevance to the program its purpose to describe.

Outpatient Education, Assessment, Treating And Training

In light of concerns over the value of a purely educational program, many back schools have expanded to include patient management. Others have developed in association with established rehabilitation clinics. This combination of an educational approach with specific patient treatment and long-term training expertise addresses one of the major requirements for back school in a work environment. Promoting back education as a means of providing future benefit is far more difficult than offering a treatment program for currently disabled workers.

Inpatient Education, Assessment And Treatment

Chronic pain patients require a thorough assessment and lengthy management. A hurried approach and a rapid inappropriate disposition may only reinforce the patient's hostility and foster further disability. In this setting, the back school becomes part of an interdisciplinary clinic employing a battery of investigative procedures and an extensive inpatient routine of operant conditioning.

Payment

Direct Patient Charge

Most back schools providing only education charge students directly. By using small classes and maximizing the efficiency of the involved professionals, the unit cost can be reduced to affordable levels. If back school is to be a "front-line" management strategy, it must be accessible to all who need it. If it is to remain attractive to private clinics and practitioners, it cannot run at a financial loss.

Third Party Payment

The more extensive programs combining education with direct patient treatment are expensive and can become cost-efficient only against a background of inflated insurance and compensation benefits. Because of the enormous financial burden of a back-injured worker in lost productivity, medical expenses, disability payments, and job replacement, cost effectiveness can be achieved within this group when as few as 1 patient in 20 returns to regular employment.

Government Support

In some jurisdictions, the cost of back education is supported within a system of socialized medicine. The amount of money available is usually sufficient to provide only cursory assessment, basic education and minimal follow-up. Socialized health care tends to move treatment towards the lowest common denominator and back school is no exception. On the other hand, this method of payment greatly increases access and makes at least a rudimentary program available to anyone who requires it.

There is little scientific validation for the concept of back school as an independent treatment modality. Although many of its components have long been recognized as useful, well controlled prospective studies of patient outcome after back education remain to be done. The Canadian Back Institute which, with the addition of direct patient care, evolved from the Back Education Units now coordinates a system of 16 clinics across Canada. Treating over 25,000 patients annually, CBI is developing a computer-generated system to track outcome and to coordinate results with the admission diagnosis. The potential for prospective research is obvious. Within such framework, the impact of a multitude of factors can be assessed and the role of education, physical training and psychological counselling can be validated. Using award systems and peer pressure, lay groups have demonstrated their ability to modify behavior. Medical acceptance of this approach has been guarded. These programs with their obvious appeal to the emotions and direct marketing techniques are contrary to many to many doctors' perception of back pain as a particularly threatening occurrence, and partly because of the high level of medical involvement in the treatment, evaluation standards found acceptable for other self-help groups are often judged inadequate for back school. Although controlled prospective studies are required, well controlled subjective assessments may, in fact, be equally valid.

In the final analysis, the success of back school will be determined by its potential to reduce low back disability. Does it really work? The very popularity of back school among its student population has made the approach suspect to some observers. Nothing in medicine can be so simple and so effective, and yet be honest. Still 94% of patients attending The California Back School were satisfied with the program, and 96% of the students at the Canadian Back Institute found the lecture series worthwhile. The reason for the consistently high level of patient acceptance has never been fully explained, but it must be pointed out that patient satisfaction does not necessarily equate with functional recovery. These same programs report a 70% success rate in the elimination of disabling back pain or a return to full employment and normal daily activity. Most patients stricken with acute low back pain recover quickly. Within six weeks 80% will return to regular employment without special treatment. The impact of back school during this early period is open to question. Early identification of the small minority of back pain sufferers destined for chronic disability is difficult, but it will be within this group that the value of back education must be demonstrated. Encouraging patients to actively participate in the rehabilitation process while avoiding programs dominated by short-term passive pain-relieving modalities is a worthwhile goal and one ideally suited to the educational format. Proving back school's ability to live up to its promise is the challenge of the 90's.

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