SELF-CARE: AN AUSTRALIAN CASE STUDY OF CHIROPRACTIC PATIENTS

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ABSTRACT

Objective: Self-care is becoming an important objective for achieving a sustainable health care system. This study examines the health care initiatives of chiropractic patients ascertaining their self-care behaviors, knowledge and information sources.

Sample: Convenience sampling of chiropractic patients attending 10 chiropractors in 3 states. Of 155 patients invited to participate, 147 agreed.

Method: Patients were interviewed to determine their smoking, alcohol, maintenance chiropractic care, exercise and nutritional supplementation practices. Data collection included dose/frequency of the activity, expected benefits, concerns about side-effects and sources of information. Data was collated and trends identified.

Results: Overall, the chiropractic patient sample reported a healthy lifestyle. Seventy-four percent (74%) had maintenance chiropractic; 69%, regular exercise; 40%, nutritional supplements; 84%, were non-smokers; and 86% were teetotallers or drank alcohol within safe limits. Few displayed appreciation of possible side-effects or 'dose-response' relationships. Lay persons were important information sources.

Conclusion: Chiropractic patients' self-care behaviors could be refined by making them more aware of the protean effects of self-care initiatives. (J Chiropr Med 2002;1:49–53)

KEY WORDS: Chiropractic; Self-Care

INTRODUCTION

Self-care is emerging as an important health promotion option. Effective self-care can be construed as a strategy that may help to curb escalating health care costs. It has furthermore been suggested that "self-care should be seen as central to all clinical interventions and clinicians should be looking for new ways to involve people in their own health care" (1). There are even those who believe that "better health care will not depend on some new therapeutic standard, but on the level of willingness and competence to engage in self-care" (2). Although to date, self-care initiatives offered in chiropractic clinics appear to be largely restricted to offering maintenance care and therapeutic exercises (3), chiropractors are favorably positioned to influence both the motivation and ability of their patients to undertake self-care.

An Australian case study found that chiropractors empower their patients (4). Empowerment refers to the ability of the individual to gain understanding, make decisions and have personal control in improving their circumstances (5). It combines self-efficacy and competence and requires informed decision making. Successful self-care is mediated by both positive outcome and efficacy expectations. Outcome expectancies are the belief that a given behavior will lead to a particular outcome; efficacy expectancies are the belief that one can successfully execute the behavior necessary to achieve the desired outcome (6). Patients who perceive that self-care will lead to valued health benefits and who feel adequately qualified to undertake self-care activities are most likely to embrace this initiative. Chiropractors are demonstrably successful at communicating with their patients and constructing a clinical reality conducive to health (7). Chiropractic with its health orientation could emerge as powerful force in the evolution of self-care.

As a prelude to ascertaining which self-care options may be most effective and efficient within chiropractic clinics, I decided to explore the current self-care information sources, knowledge and behaviors of chiropractic patients.

METHODS

A case study was undertaken to describe the self-care initiatives of chiropractic patients. Data was collected from a convenience sample of chiropractic patients drawn from chiropractic practices in the coastal areas of Western Australia, Queensland and Victoria. Ten locally trained practitioners, 8 from RMIT/Phillip and 2 from Macquarie University, agreed to their patients being

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invited to participate in the study. Of the 155 patients who were asked to participate, 147 consented. The practice distribution of patients ranged from 5 to 33; the mean number of patients per clinic was 15, the median was 13. Patients were interviewed to ascertain their routine self-care behaviors with respect to their smoking, drinking and exercise habits, their use of nutritional supplements and adherence to a maintenance chiropractic care program. Patients were asked to describe their self-care activities they currently pursued or would be interested in executing. They were requested to indicate what health benefits they hoped to experience from their health care endeavors and what benefits, if any, they had actually experienced. Patients were also asked to indicate any concerns they harbor with respect to their exercise, maintenance chiropractic and/or nutritional supplementation protocols. The 99 Queensland and Victorian patients were also asked to indicate the source of their self-care information. Interview data was collated and trends identified and described.

RESULTS

Of the 147 patients who agreed to participate, 95 were female and 52 were male. The age distribution was as follows: 6% between the ages of 18–25 yrs; 41% between 26–45 yrs; 41% between 46–65 yrs; 6% between 66–75 yrs, and the remainder were over 75 yrs. Fifty-two percent (52%) of the patients in the study indicated they did not consume any alcohol and 34% had no more than 2 standard drinks daily. Only one female had 4 drinks per day. No other female had more than 2 standard drinks per day. Only three males had 4 or more drinks per day - two reported 6 or more drinks. Eighty-four percent of participants were non-smokers. Twelve percent (12%) smoked more than 10 cigarettes a day. Seventy-four percent (74%) of the sample had maintenance chiropractic care, 69% undertook regular exercise and 40% took nutritional supplements either in the form of vitamins, minerals and/or other nutrients, eg, garlic. Beyond the listed initiatives, the only other self-care objective volunteered by patients (4%) was stress management. Interest was expressed in developing competence in strategies varying from yoga through meditation to massage. Six percent (6%) neither reported currently undertaking nor intended to undertake a self-care initiative. See Figure 1.

With respect to musculoskeletal health care, less than 5% of participating patients acknowledged any concerns about side effects either from exercise or chiropractic care. The concerns voiced on direct questioning were joint damage attributable to exercise and/or vascular, soft tissue or skeletal damage resulting from manipulation. When asked to explain why they underwent maintenance chiropractic care most patients specified that chiropractic care afforded them pain relief and enhanced their mobility. A few indicated they had maintenance chiropractic to improve their general health. When asked why they took regular exercise, most patients indicated they did so for health reasons. Apart from the few who specified weight control, most were somewhat vague about any health benefits, beyond 'fitness,' that they expected to or were experiencing from their exercise program. The majority of exercise programs consisted of walking for at least 3 days of the week for a minimum of 30 minutes on each occasion.

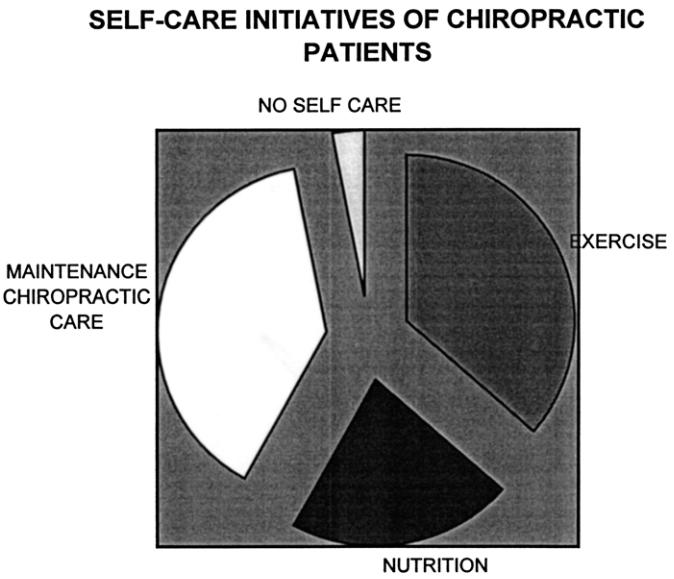

Figure 1: Self-care initiatives of chiropractic patients.

When questioned about self-care with respect to regular nutritional supplementation, 33% were found to be taking vitamin supplements, 18% minerals and 14% other nutritional supplements. The nutritional supplements most frequently consumed were cod liver oil, evening primrose oil, garlic, fish oil (n-3 fatty acids), fiber and soy. Fourteen percent of patients routinely took multivitamin tablets with or without minerals. Eight percent of patients were on vitamin C, the only dose mentioned was 500mg; and 6% were taking vitamin E, the only dose identified was 250IU. Other vitamin supplementation reported included folic acid, vitamin B complex, and vitamins A and D. Calcium, magnesium, iron, zinc and chromium were among the preferred mineral supplements. Except for the few patients who specified the doses of vitamins C and E they were taking, patients reported doses in terms of number of tablets and had no idea of nutrient concentration per tablet. Eight percent of patients reported taking herbs.

Patients reported taking herbs to relieve stress and/or pain, prevent colds and improve health. They took vitamin C to prevent colds and improve immunity. The identified vitamin C as an antioxidant and along with vitamins E and A they sought to 'purify the body' or 'kept arthritis in check.' Vitamin E was taken to enhance healing, improve general, skin and heart health and to 'thin the blood.' The effects attributed to taking vitamin E by one patient was 'feeling less tired.' Eight percent of patients who took multivitamins did so to compensate for what they perceived as an inadequate diet. Other did so to 'feel better,' 'manage stress,' 'improve immunity,' 'increase energy' and 'keep well.' Patients believed that these objectives were being met. One patient reported that she took multivitamins to 'balance hormones.' Vitamin B complex was taken to decrease stress and 'fix my back injury.' Folic acid was taken by 1 male and 4 female patients who wished to increase their fertility or fall pregnant. Vitamin B_6 was taken 'for nerves' and to reduce the effects of premenstrual tension. Vitamin B_1 was reported to effectively prevent mosquito bites.

Iron supplements were used by women planning a pregnancy, to treat anemia and for its 'calming effect.' While most patients on iron reported feeling less tired, 1 found she was less irritable. Zinc was taken to prevent colds and improve immunity, to correct a deficiency and to relax muscles. One male reported taking zinc to enhance fertility; the result he reported was a 'better sex life.' Eleven percent of patients took calcium with or without magnesium to decrease the risk of osteoporosis and/or to strengthen bones and relax muscles. Calcium was also taken by patients planning a pregnancy and to 'improve immunity.' Chromium was taken to increase energy.

Garlic was taken to 'thin the blood,' prevent colds and improve immunity. Cod liver oil was consumed to prevent colds and reduce arthritis. Evening primrose oil was taken to treat premenstrual tension, and as an anti-oxidant to decrease joint pain and improve immunity. Omega-3 fatty acids were acids were taken as treatment for arthritis, as an anti-oxidant, to stop blood clotting and to achieve better health. Soy supplements were taken to reduce the effects of menopause, particularly hot flashes. Another patient reported she took calcium to control her hot flashes. When asked if she had found it had helped, she responded 'not yet.'

Most patients felt that their chiropractors could not further facilitate their self-care. Failure of the majority of patients interviewed to express a specific desire for chiropractic assistance with their self-care may however not accurately reflect their disinterest in chiropractic assistance in this dimension of health care but may rather be construed as reluctance to imply any dissatisfaction with their current chiropractic care. Twenty-four patients (16%) felt they would have benefited from more exercise advice. Four would have liked more information about spinal health or posture. A further 12 patients expressed interest in their chiropractor providing them with lifestyle advice. Six patients specifically mentioned relaxation or stress management techniques. Additional questioning of Queensland and Victoria patients found that 83% experienced neck, shoulder or back tightness. In fact, in 13%, this was their only evidence of acute stress. Four patients expressed interest in dietary guidance including weight control.

The information sources which patients most frequently reported using were in order of important: friends, family, chiropractors, medical doctors, the print media and television. Figure 2 compares the relative contribution made by lay persons, professional groups and the media to self-care among Queensland and Victorian patients. The information sources depicted under the 'chiropractic care' group refer to the self-care initiative of seeking chiropractic care, not the decision to undergo maintenance care.

DISCUSSION

In this study, chiropractic patients emerged as a relatively health conscious group. The alcohol consumption of the group fell within safe limits for all but 1 female and 2 males whose drinking entered the hazardous zone and 1 one male whose drinking would be catego-

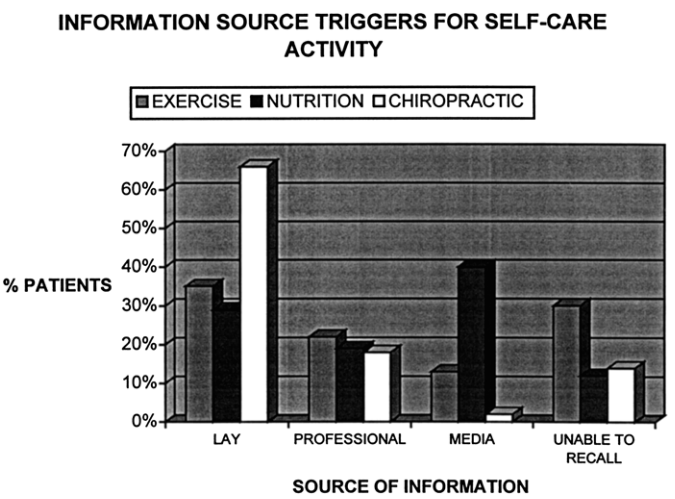

Figure 2: Information source triggers for self-care activity.

rized as harmful (8). Most patients were non-smokers, and although there is no safe smoking level, only 1 in 10 smoked more than 10 cigarettes a day. In addition to avoiding unhealthy behaviors most patients actively pursued some form of health promotion. Nine out of 10 patients adopted at least 1 self-care initiative.

Despite good health awareness, many patients showed little understanding, beyond such generalization as 'to keep fit,' 'for better health' or 'to keep mobile,' of why they were undertaking self-care. While more specific information was offered with respect to their rationale of taking nutrients, no single patient seemed aware of the total potential benefits of any particular nutrient. Garlic was consumed to 'thin the blood,' a finding supported by its antiplatelet activity reported the literature (9). Its other cardioprotective actions were largely overlooked. In addition to its favorable hemostatic effect, garlic has a lipid lowering effect (10–12), antioxidant activity (13), and hemodynamic properties (14). Garlic in doses of 800mg (powered)/day increases the pain free walking distance in patients with intermittent claudication (15). Similarly, although patients recognized that an adequate calcium intake is important for bone health, no patient mentioned that higher intakes of calcium are associated with a reduced risk of gastrointestinal tract cancers (16,17) and recurrent kidney stones (18), increased excretion of saturated fats and a reduction of serum LDL-cholesterol and apolipoprotein B (19), and a modulation of blood pressure levels (20).

In addition to a failure to appreciate the protean effects of nutritional supplements, there appeared to be a substantial lack of awareness of dose-response relationships. While most patients could report on the number of tablets they consumed, very few could specify doses. Although patients reported taking vitamin E to 'enhance healing, improve general, skin and heart health and thin the blood,' only 1 patient could specify the dose he was using to achieve his desired health goal (250IU). At doses of 100IU/day, single entity vitamin E supplementation reduces the risk of a heart attack by between one-third and one-half depending on gender (21,22); however, higher doses of 400IU/day or more are required to decreases the susceptibility of LDL to oxidation (23). Patients also appeared largely ignorant about dose-related side effects. While Vitamin E in divided doses of 400IU twice a day is regarded as free of side effects (24), bleeding may be a problem in persons with borderline vitamin K status taking as little as 100–400IU/day of vitamin E. Even normal persons are predisposed to easy bruising in doses of over 800–1200IU/day. Aggravation of hypertension and fatigue are other possible side effects. Ironically, 1 patient reported 'feeling less tired' after taking vitamin E.

Patients appeared largely unconcerned about side effects with respect to most of their self-care initiatives. Very few patients reported concern about any adverse effects associated with chiropractic manipulation. A recent prospective clinic-based survey of treatments on over 1000 new patients by over 100 chiropractors found at least 1 reaction was reported by 55% of the patients some time during a course of up to 6 treatments (25). Of the reported reactions, the most common were local discomfort (53%), headache (12%), tiredness (11%), or radiating discomfort (10%). Although reactions were mild or moderate in 85% of patients, a few patients did report dizziness and or nausea. Patients showed little awareness of the potential for side effects from nutrients; certainly no patients taking fat soluble vitamins such as vitamin A or D expressed any concerns about toxicity. This is a particular concern in view of patient naivete regarding dose-response relationships. On the other hand, some patients undertaking more vigorous exercise and participating in contact sports did have concerns about joint damage. The majority of patients in this study did, however, largely limit their exercise to walking, a safe endeavor and one consistent with findings from the United States which suggested that the principle focus for exercise health should be on physical activity and not physical fitness (26,27).

The substantial use of non-professional information sources may be one reason for the failure of individuals to appreciate certain of the implications of and responsibilities for undertaking self-care. Sole reliance on lay opinion, in either the form of significant others or the popular media, as definitive information sources may carry potentially negative, indeed serious, repercussions. While lay sources of information provide a useful tool for enhancing awareness, a greater role by health professionals in the definitive stages of self-care planning seems desirable. The probability that self-care is safe and appropriate could be substantially increased by professional evaluation of proposed self-care programs. To fulfill this emerging primary contract obligation, the chiropractic profession may need to revisit the traditional clinical consultation with a view to actively promoting safe and effective patient self-care.

CONCLUSION

The majority of chiropractic patients in this study demonstrated some degree of personal responsibility for their health care. The information sources for such endeavors were, however, more often than not non-

health professionals. While the general self-care behaviors of participants in this study were consistent with good health professionals, the potential for untoward outcomes attribute to inadequate knowledge cannot be excluded. The role of chiropractors in refining their patients' health knowledge and self-care initiatives requires clarification.

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