ORIGINAL RESEARCH

On-Site Chiropractic Care as an Employee Benefit: A Single-Location Case Study

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ABSTRACT

Objective: The purpose of this report is to describe the role of on-site chiropractic care in one corporate environment.
Methods: A part-time chiropractic practice that provides services to a single company on site, 1 day per week, is described. Most care is oriented toward "wellness," is paid for by the employer, and is limited only by the chiropractor's few weekly hours of on-site availability. With approval from the company, the authors conducted an absenteeism analysis after obtaining ethics approval and consent from employee–patients who received care between 2012 and 2014. Comparisons of absenteeism rates of the sample were compared with lost worktime rates from the US Bureau of Labor Statistics' Labor Force Statistics.
Results: Of 40 current employees, 35 used chiropractic services; 17 employee–patients met the inclusion criteria. The lost worktime rates of those using chiropractic services (0.72%, 0.55%, and 0.67%, for 2012, 2013, and 2014, respectively) were lower than corresponding rates from Labor Force Statistics (1.5%, 1.2%, and 1.1%).
Conclusions: Absenteeism for the employee–patients was lower than equivalent national figures in this sample of workers. Though these results may or may not be related to the chiropractic care, these findings prompt further investigation into this relationship. (J Chiropr Med 2017;16:183-188)

Key Indexing Terms: *Chiropractic; Manipulation, Chiropractic; Health Promotion; Absenteeism; Secondary Prevention; Tertiary Prevention*

INTRODUCTION

Although most doctors of chiropractic (DCs) practice in a health care office setting,[1] recently there has been heightened interest in the role of chiropractic care in corporate on-site health clinics. For example, the Foundation for Chiropractic Progress (F4CP) report[2] mentions 2 studies that found the inclusion of chiropractic care in on-site clinics resulted in lower utilization of some health care services, such as radiology, physical therapy, and emergency services; decreased overall health care costs; and improved neuro-musculoskeletal function.[3,4] Similarly, in another study comparing on-site and off-site treatment for occupational low-back injuries, it was found that on-site treatment was associated with lesser amounts of treatment, fewer modified workdays, lower treatment costs, better productivity, lower transportation costs, shorter duration-of-injury claims, and lower total claim costs. Treatment included spinal manipulative therapy, electrotherapy, back care education, and an exercise program.[5] However, there seem to be few investigations of chiropractic care offered on site.

The owner and some longtime personnel of a company were interested in examining their employees' absenteeism, which they speculated might be lower because their employees received chiropractic care. They had valid reasons to want a low absenteeism rate, as productivity losses resulting from health-related absences are expensive to employers,[6-8] totaling well above $200 billion annually in the United States.[9,10] Much of the cost of care is related to low back pain and other common pain conditions.[9,11,12] One theoretical model of "white-collar" worker absenteeism estimated additional annual expenses for the employer of nearly $10 000 (US) per employee.[13] Absenteeism is associated with a lower quality of life for employees.[13] Employer-implemented programs designed to improve employees' health status have been reported to reduce medical costs and have positive impacts on absenteeism.[14] The purpose of this article is to describe the role of on-site chiropractic care in a specific corporate environment.

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Paper submitted July 18, 2016; in revised form March 12, 2017; accepted March 14, 2017.
1556-3707

http://dx.doi.org/10.1016/j.jcm.2017.03.001

Methods

Corporate and Clinical Environment

This case study describes a single, small company with chiropractic care available on site 1 day per week, offered primarily as wellness care (sometimes called "maintenance" care).[15-17] The company is a local law firm, currently with 40 employees. The principal author is the treating DC, and the owner of the firm is a business partner of the chiropractor's main clinic. The wellness care provided in this setting is for similar purposes, as has previously been reported for chiropractors[17]: to minimize the recurrence or exacerbation of previous problems, primarily musculoskeletal; to provide palliative care for problems that cannot be eliminated (e.g., degeneration); to aiding in stress management; and to help maintain and optimize general health.

At the time of this report, the principal author had been practicing on site for approximately 14 years and the owner and some long-time employees thought that the firm benefitted from having a part-time chiropractic practice on site. One morning each week, the DC brought in a portable chiropractic table and turned the company conference room into a temporary clinic. The employees are allowed to use work time for their visits; visit frequency is limited only by the DC's hours of availability. The firm pays per-patient fees for the service. Chiropractic care is a benefit of employment for those who wish to make use of it. The type of care provided on site is primarily wellness care, as is discussed below. Occasional referrals have been made to the DC's regular office, for forms of care that cannot be easily provided on site, and to outside providers for medical evaluation and diagnostic imaging.

Chiropractic services were available for whatever the employees want to consult, within the DC's range of knowledge and scope of practice. In most visits, patients receive chiropractic adjustment (chiropractic manipulation) of the spine and pelvis, with either high-velocity, low-amplitude thrust by hand, with an impulse instrument (Neuromechanical Innovations, Chandler, Arizona) or an activator instrument (Activator Methods, Phoenix, Arizona). Depending on their needs, patients may receive adjustment of extremity joints, active isolated stretching, laser therapy (Multi Radiance Medical TQ Solo, Solon, Ohio), or guidance in therapeutic exercises. Employee–patients may ask for advice on computer workstation ergonomics or on exercise in general, nutrition, or whether they should put ice or heat on a recent strain. They may be referred to the DC's nearby main office at no additional cost for therapies such as electrical muscle stimulation, activities emphasizing balance and neuromuscular education, or exercise instruction using a Rotex motion machine (Rotex, Opelousas, Louisiana). In all cases, adjustments, exercises, other therapies, and advice are directed toward individual needs.

The wellness-oriented care provided on site is consistent with what some DCs have called "maintenance" care, which uses the concepts of primary, secondary, or tertiary prevention. Primary prevention is directed at preventing diseases or conditions from developing. Secondary prevention identifies a condition early and prevents it from worsening. Tertiary prevention focuses on maximizing function and preventing further deterioration.[18-20] In addition to chiropractic adjustment or manipulation, visits may include manual muscle therapy, discussion of nonmusculoskeletal or neurological health problems or other personal circumstances, instructions on how to perform exercises, analysis of work-related body mechanics, and examination of other lifestyle factors, such as nutrition, physical activity, and smoking.[17-19,21]

Absence Analysis

A letter of agreement from the firm's owner was obtained. This study was approved by the institutional review board of Life University. We contacted each employee who had received chiropractic care and requested permission to use their information; each signed a consent form. Employees were eligible for inclusion if they were currently working full-time for the firm and if they had received on-site chiropractic care during the previous 3 years, 2012 to 2014. Additionally, assuming that one attribute of wellness care would be some amount of ongoing care, we included only employee–patients whose care averaged at least 12 visits per year. Employee–patients were excluded if they had had some reason for prolonged absence from work unrelated to general health and wellness, including family leave (childbirth or death of a relative), surgery, or other unanticipated reasons. Given that the information could be sensitive, we gave assurances of privacy and confidentiality. We did not have contact information for non–employee–patients, nor did we have institutional review board approval to seek non–employee–patient information.

The firm's human resources personnel provided numbers of absences from work for the years 2012–2014 for the employee–patients. Consistent with the Labor Force Statistics definition of absence, from the US Bureau of Labor Statistics, an "absence" was defined as an entire day out of the office for one's own illness, injury, or medical problems; child care problems; other family or personal obligations; civic or military duty; or maternity or paternity leave.[22] We did not count absences for vacation or personal days, holidays, or any other reason not included above.[22] Health records were the source for other information, such as height, weight, age, gender, number of chiropractic visits, and number of years of care.

We compared the employee–patients' rates of absenteeism with values provided by the Bureau of Labor Statistics, specifically the Labor Force Statistics (LFS), for the years 2012–2014 from the Current Population Survey, "Absences from work of employed full-time wage and salary workers by occupation and industry" (Table 1).[22-24] Two of the employee–patients are attorneys; the other 15 work in various administrative roles. Therefore, we extracted numbers for "lost worktime rates," number of absences per employee per year, for "legal occupations" and

Table 1. *Lost Worktime Rates for Full-Time Wage and Salary Workers, 2012–2014, According to the Labor Force Statistics From the US Bureau of Labor Statistics*

		Legal Occupations			Business and Financial Operations Occupations		
Year	No. of Workers	Total	Illness or Injury	Other Reasons	Total	Illness or Injury	Other Reasons
2012	5 427 000	1.5%	0.8%	0.7%	1.3%	0.7%	0.6%
2013	5 548 000	1.2%	0.7%	0.5%	1.3%	0.8%	0.6%
2014	5 738 000	1.1%	0.6%	0.5%	1.4%	0.8%	0.6%

"business and financial operations occupations." According to the LFS, "Absences are defined as instances when persons who usually work 35 or more hours per week (full time) worked less than 35 hours during the reference week for one of the following reasons: own illness, injury, or medical problems; child care problems; other family or personal obligations; civic or military duty; and maternity or paternity leave. Excluded are situations in which work was missed because of vacation or personal days, holiday, labor dispute, and other reasons."[22-24]

To make the comparisons, we counted absences according to the LFS definition and calculated lost worktime rates as a percentage. Using 2 free online calculators[25,26] we determined that the number of working days per year was 251 for 2012, 2013, and 2014 (excluding Saturdays, Sundays, and major holidays); multiplying by 8 hours per day gives a number for possible working hours, per person, per year: 2008. We subtracted 120 hours (3 weeks) for vacation and personal days to derive a figure of 1888 expected working hours per person, and then multiplied the company's total absences per year by 8 hours to obtain total absence hours (Table 2). To calculate the lost worktime rate, we divided the company's total absence hours each year by the total expected hours of work. That resultant value can be compared with the LFS total lost worktime rate.

Results

Absence Analysis

Of 40 current employees, 21 did not meet the inclusion criteria for the absence analysis: 16 had been patients less than 3 years, 2 receiving care worked only part-time, and 3 longtime employees had never received care. Additionally, there also were 2 longtime employees who had received care, but were excluded for not fitting a wellness model: 1 had made only 3 visits in 6 years, and the other had had only a single consultation. Seventeen employee–patients were included in our analysis. One was included despite having made only 2 visits during the span of 2012–2014, because he averaged 33.9 visits per year overall as a longtime patient.

Table 2. *Group Absence Values as Provided by the Firm's Human Resources Personnel* [a]

	Lost Worktime Rate	Total Absences	Total Time Absent (h)	Mean (SD) Absences	Min/Max Absences
2012	0.72%	29	232	1.7 (1.9)	0/7
2013	0.55%	22	176	1.3 (1.7)	0/7
2014	0.67%	27	216	1.6 (2.0)	0/7

[a] Total absences are the aggregate for all employee–patients. Means, standard deviations (SDs), minimums, and maximums refer to individuals ($n = 17$). The expected working hours per employee is 1888, and for all 17 employees is 32 096.

Around 40% of this group sought out chiropractic care despite not having a particular complaint, and are mostly asymptomatic. Several others complained of chronic pain or "strain" in the neck, midback, low back, knees, or shoulders. A few individuals had complaints related to either chronic malaise, inflammation of multiple joints, or gout. Several were overweight. A few members of the patient group suffered from inactivity, but at least 1 can be described as having "weekend warrior" exercise habits.

The practice was available approximately 49 weeks of the year, and the mean number of visits per year per employee for 2012–2014 was 38.5. Table 3 lists, for each year, the group's total number of visits, mean visits per patient, and range, and separates these values for men and women. The group average is elevated by a few individuals, as suggested by maximum visit-per-year values ranging from 49 to 53; these elevated rates were determined by the patients' preferences. The male patients, on average, made slightly more annual DC visits than did female patients (42.2 vs 35.3), but not significantly so ($P = .15$) and were slightly younger than the female patients (40.8 vs 46.6), but not significantly so ($P = .24$). Some patients made visits to the DC's main office, outside of the on-site practice's available hours; these are included in the calculations but make up less than 1% of the total. Several of the employee–patients had used the chiropractic services much longer than just the 2012–2014 period, some for the entire 14 years the program had existed; the group average duration was just over 11 years.

Absence data and lost worktime rates are summarized in Table 2; data for attorneys and administrative employees are averaged together. The lost worktime rates (LWRs) for the employee–patients were lower than the equivalent "total" LWR figures seen in the Bureau of Labor Statistics figures for all 3 years, for both the legal occupations and business and financial operations occupations categories.[22-24] Although we believe the "total" LWR figures are the appropriate comparisons, the employee–

Table 3. *Numbers of Chiropractic Visits for the Employee–Patients*

		Whole Group (n = 17)	Male (n = 8)	Female (n = 9)
		Age: 43.8 (10.0)	Age: 40.8 (10.2)	Age: 46.6 (9.5)
2012	Total visits	625	330	295
	Mean (SD)	36.8 (18.8)	41.3 (16.9)	32.8 (20.6)
	Range	0–52	1–52	0–50
2013	Total visits	661	330	331
	Mean (SD)	38.9 (16.5)	41.3 (16.7)	36.8 (17.0)
	Range	0–49	0–49	5–48
2014	Total visits	680	352	328
	Mean (SD)	40.0 (15.7)	44.0 (17.5)	36.4 (13.9)
	Range	1–53	1–53	5–49
All 3 y	Visits/year			
	Mean (SD)	38.5 (16.8)	42.2 (16.3)	39.8 (16.8)

SD, standard deviation.

patients' LWRs also compare favorably to the Bureau of Labor Statistics figures "illness or injury" for 2013 and 2014.

Discussion

The LWRs calculated for the employee–patients in this study are consistent with the informal observations of the company owner and some longtime employees that their absences seemed low—about half of what might be considered the national norm. These results make a modest contribution to the limited previous investigation of this topic. However, we recognize that our absence analysis has substantial limitations, as discussed below.

Although it is not uncommon for chiropractors to recommend wellness care to their patients, it is unusual for such care to be available in the workplace and while employees are "on the clock," as in the scenario described above, with the costs of care and travel to a clinic removed as barriers to access. A potential benefit to the employer could be that, if chiropractic wellness care has a beneficial effect, employees may miss less work time because of pain, discomfort, or generally not feeling their best.

Other Examples of On-Site Care

In considering the role of on-site chiropractic care, it may be helpful to look at other fields of health care. Employees having access to pharmacies at workplace health centers tend to have higher rates of adherence to medication plans.[27,28] Dalal et al[29] reported that users of a corporate on-site medical center had fewer emergency room visits, inpatient hospital stays, and outpatient hospital visits than their co-worker non-users. Pachman et al[30] surveyed employees using an on-site corporate medical clinic. In many cases, employees came in to work because the center was available; thus, they found a reduction in absenteeism of 3.3 days per employee, on average, and a total cost savings of nearly a half million dollars per year (in the mid-1990s, U.S. dollars).[30]

Goldsmith and Harris[31] reported that most participants in an on-site program for individuals with cardiometabolic syndrome progressed in their condition management, and the program costs of offering face-to-face consultations with nurse educators were offset by medical care savings. They emphasized that, to be successful, health promotion programs need to have measurable impact, require a high level of engagement with the intended population, and have to be sustainable.[31] Sisko et al[32] provided an 8-session, 1-month, on-site chair massage program to a group of office workers, and found significant increases in cervical range of motion, and significant decreases in pain and discomfort, as compared with no massage or only 1 session.

Limitations and Future Studies

For a number of reasons, it is not possible to say that on-site chiropractic care contributed to lower absenteeism for this company. For starters, we studied a relatively small company, and absence rates tend to be higher in larger companies[33]; there are also numerous components of the company's internal culture that we have no way to account for. We recognize that this example is a unique setting, and some of its features may not generalize to other settings without consideration of additional organizational and economic factors.

For our analysis, we have no control group, which is a limitation and perhaps represents a challenge to be considered prospectively by future researchers of similar situations. Although those employees who received minimal care (or none) may seem like an obvious choice for a control group, such data are not easily obtained retrospectively. Additionally, although we know the patients had no serious, chronic illnesses having a major impact on their employment, we would not know that about the non-patients. In the case for this study, there are only 5 non–employee–patients who

worked full-time during 2012–2014; the group would be too small for a comparison to be meaningful.

We cannot rule out that those seeking chiropractic care were healthier and, therefore, less likely to be absent. Those seeking chiropractic care on site may already have been healthier or willing to engage in healthier behaviors and, thus, less prone to absenteeism than others.

It may be difficult to generalize our findings to other settings. The number of visits per year for some of the employees seemed very high. Presumably, this is because the visits were free to the patient, having been paid by the company. Thus, cost was not a barrier to receiving care, nor was any travel required. Some made the most of the opportunity, and chiropractic care became a regular part of their work week. If the on-site care had an actual effect on employee absence, we have no data on dose response or cost effectiveness.

Another limitation is that the treating chiropractor is also the principal author of the study. The data existed before this retrospective study was conceived, but the intertwining roles are a potential source of bias. These are complex issues beyond our ability to assess but are important for any employers, insurance carriers, or other entities considering on-site care of any type and who would need to determine appropriate limits.

It is possible that employees receiving free chiropractic care on site might feel obligated to be at work more often, even if they do not feel well. Although our informal observations suggest otherwise, we have no way to analyze this possibility. However, it is important to note again that the owner and founder of the firm is also a business partner in the principal author's main chiropractic clinic. This is widely known by the firm's employees. Although there appears to be no pressure for them to receive care, we cannot completely rule out whether any employees think that seeing the DC might influence perceptions of their job performance. Finally, there is a limited benefit to lower levels of absenteeism. Employees who work while sick, known as presenteeism, also are costly to companies.[33-36]

There are several ways in which other chiropractors and researchers, in future investigations of on-site wellness chiropractic care, could improve on what was done in this present study. Some examples include planning prospectively for larger samples and a control group and identifying outcome measures in addition to absenteeism. Estimations of cost effectiveness and dose response would also be important, as they would help determine whether there should be limits to care frequency and, if so, to what amount? These last 2 are, of course, issues relevant to chiropractic clinical research in general.[37-42]

Conclusions

The rates of absenteeism for the employee–patients in 2012–2014 was lower than equivalent national figures from the Bureau of Labor Statistics, though that may not be related to the available chiropractic care. On-site chiropractic care could be beneficial to both employees and employers, though a number of factors are yet to be examined. The generalizability of our results is limited, but we hope that, in the future, other chiropractic researchers will develop similar, more extensive projects with greater rigor.

Funding Sources and Conflicts of Interest

The owner/founder of the firm described in the above study is a business partner in the principal author's main chiropractic clinic, and the principal author was also the treating chiropractor of the study. No funding sources or other conflicts of interest were reported for this study.

Contributorship Information

Concept development (provided idea for the research): S.M.
Design (planned the methods to generate the results): S.M., B.R.
Supervision (provided oversight, responsible for organization and implementation, writing of the manuscript): S.M., B.R.
Data collection/processing (responsible for experiments, patient management, organization, or reporting data): S.M.
Analysis/interpretation (responsible for statistical analysis, evaluation, and presentation of the results): B.R.
Literature search (performed the literature search): B.R.
Writing (responsible for writing a substantive part of the manuscript): B.R.
Critical review (revised manuscript for intellectual content, this does not relate to spelling and grammar checking): S.M., B.R.

Practical Applications

- Employees were allowed to use work time for their visits, with frequency limited only by the DCs' hours of availability.
- Absenteeism for this small group of participants was lower than equivalent national averages.

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