

CHRONIC PAIN

By

Jannae Hanson-Parkes

A Research Paper

Submitted in Partial Fulfillment of the
Requirements for the
Masters of Science Degree
With a Major in

Vocational Rehabilitation

Approved: 2 Semester Credits

Investigator Advisor

The Graduate School
University of Wisconsin-Stout
November 2002

The Graduate School
University of Wisconsin-Stout
Menomonie, WI 54751

ABSTRACT

<u>Hanson-Parkes</u>	<u>Jannae</u>	<u>M.</u>
(Writer)	(Last Name)	(First)
		(Initial)

CHRONIC PAIN AND THE USE OF COMPLEMENTARY MEDICINE
(Title)

<u>Vocational Rehabilitation</u>	<u>Dr. Kathleen Deery</u>	<u>November /2002</u>	<u>35</u>
(Graduate Major)	(Research Advisor)	(Month/Year)	(No. of pages)

America Psychological Association (APA) Publication Manual
(Name of Style Manual Used in this Study)

Chronic pain is the primary reason for disability in the United States, causing functional disabilities, job loss, depression, and psychosocial stress in the lives of a significant number of Americans. Researchers consider chronic pain the third largest health issue in the United States. According to the Disability Statistics Center, 15 % of Americans have chronic health problems, 4.6% of which are limited in major life activities (La Plante & Carlson, 1996). Individuals with chronic pain who have been out of work for more than one year have a less than

3% chance of returning to full-time work; persons with chronic pain who are out of work for more than 2 years have less than a 1% chance of working in the future (Jamison, 1996). This poses significant challenges to vocational rehabilitation counselors whose fundamental role is to help individuals with disabilities return to work. Additionally, rehabilitation counselors are being asked to meet the needs of a diverse clientele, many of whom use complementary treatments for chronic pain management.

The purpose of this study was to investigate the current attitudes and knowledge base of undergraduate students in vocational rehabilitation classes regarding chronic pain and the use of complementary treatments for chronic pain management as well as awareness of risk factors in complementary therapies. A survey research methodology was used in this study, and will include 12 questions that ask about the subjects' familiarity with and use of alternative and complementary treatments in the use of chronic pain management. No existing survey on use of complementary therapies for chronic pain management was identified; therefore a new survey was created. A brief overview of the study, was given by the principal investigator, and a glossary of definitions of complementary treatments was be attached to the survey to clarify any unfamiliar terms.

The participants in this study were selected from undergraduate rehabilitation classes during the fall semester at the University of Wisconsin-Stout. No identifying information will be included on the survey questionnaire. Students were given a brief introduction to the study, and then given the option of participating. They were informed that their participation was voluntary, and that their decision would in no way impact their grade in the course. The signed forms were detached from the survey prior to data analysis and placed in a locked file cabinet at the university. Raw data (without identifying information) was held in a separate file secured at the principal investigator's home. Data analysis included descriptive statistics to look at general trends in subjects' responses and examine the potential use of complementary treatments for chronic pain management.

Table of Contents

Abstract.....	ii
Table of Contents.....	v
List of Tables.....	vii
Chapter 1: Introduction.....	1
Chronic Pain Management.....	1
Conventional Pain Management.....	2
Complementary Treatments.....	2
Vocational Rehabilitation.....	3
Definition of Terms.....	4
Statement of the Problem.....	4
Research Questions.....	5
Chapter 2: Review of Related Literature.....	6
Consumer Demand.....	6
Government Initiatives.....	8
Minority Research.....	8
Vocational Rehabilitation Research on Minority Populations.....	9
Chapter 3: Methodology.....	11
Selection and Description of Sample.....	11

Instrument.....	12
Data Collection.....	12
Data Analysis.....	12
Chapter 4: Results.....	13
Introduction.....	13
Demographics.....	13
Research Questions.....	14
Question 1.....	14
Question 2.....	15
Question 3.....	18
Question 4.....	18
Chapter 5: Discussion.....	19
Limitations.....	19
Conclusions.....	19
References.....	21
Appendix A :.....	25

List of Tables

Table 1: Familiarity of Treatment Options	14
Table 2: Treatment Options Personally Used	15
Table 3: Training in the Use of Complementary Treatments	16
Table 4: Training in the Risks of Complementary Treatments	17
Table 5: Information on Complementary Treatments	18
Table 6: Information on Risks of Complementary Treatments	18

CHAPTER 1: INTRODUCTION

Chronic Pain Management

Chronic pain is a major health issue in the United States. Many organizations view inadequate pain management as serious issue for Americans, and call for increased funding, as well as initiatives to identify barriers to pain management. Jamison (1996) notes there are 15 groups and journals on pain in the United States alone. Researchers make a clear distinction between acute pain and chronic pain. Acute pain is typically intense, easily defined, and lasts a brief amount of time. Chronic pain, on the other hand is constant, or flares up frequently, is difficult to define, and persists for more than six months (Kabat-Zinn, 1990; Mayo Clinic on Chronic Pain, 1999). Chronic pain is complex and multifaceted in nature, causing unique psychological and physiological responses. These responses can vary widely by race, ethnicity, and age, causing unique challenges for pain management.

A large number of Americans experience chronic pain, causing functional disabilities, job loss, and psychosocial stress (Johnson, 1999). Furthermore, the numbers of individuals, who are disabled by chronic conditions, including chronic pain, are growing. A National Health Interview Survey reported that 15 % of Americans, or 37.7 million people, have chronic health problems that significantly limit major life activities (LaPlante & Carlson, 1996). In 1999, researchers estimated that 50 million Americans experienced some form of disability from chronic pain (Arnst, Licking, & Barrett, 1999; Mayo Clinic on Chronic Pain, 1999), and others estimate that 86 million Americans have some level of disability from chronic pain (The American Chronic Pain Association, 2002). This translates into enormous financial and social costs for individuals with

chronic pain, their families, and society as a whole. Medical economists assess a \$100 billion yearly expenditure for pain management in the United States. This includes 515 million lost workdays and 40 million visits to physicians (Arnst, Licking, & Barrett, 1999).

Conventional Pain Management

Conventional methods used for treating chronic pain include medication, physical therapy, exercise programs, and surgery, many of which are ineffective and in some cases may lead to more serious disability (Johnson, 1999). For example, sixty percent of American hospital patients have experienced harmful reactions to drugs, and 60,000 people die every year from problems associated with drug interactions (Vickers, 1993). Narcotic medications are used extensively for chronic pain management. Unfortunately, narcotic medications may increase the problems related to chronic pain. For example, individuals using narcotic medications may experience difficulties with concentration, bodily functions, and mental abilities (Andrew, 2000). Other problems include increased tolerance and dependence on medication, nausea, confusion, drowsiness, and dry mouth.

Complementary Treatments

“Complementary medicine” is the term preferred by many medical and academic researchers (Easthope, Trantner, & Gill, 2000.) This thesis will use complementary treatments and alternative therapies interchangeably. Complementary and Alternative Treatments are generally defined as therapies that complement conventional forms of medicine and are not readily available in hospitals or clinics, or are not generally covered by insurance. Side effects from medications and complications from surgery are two

common reasons individuals with chronic pain choose complementary treatments for pain management (Vickers, 1993). Additionally, individuals choose complementary treatments and alternative therapies because they are more in line with their personal values. Astin, (1998) found that users of complementary therapies believed in the importance of physical, psychological, and spiritual aspects of health.

Vocational Rehabilitation

Chronic pain brings significant challenges to rehabilitation counselors, whose job it is to assist people in finding and maintaining employment. This is an important issue because chronic pain may be the key to success or failure for an individual receiving vocational rehabilitation services. Although pain is not viewed as a disability, many professionals recognize the impact of chronic pain in vocational rehabilitation outcomes. For example, The Disability Handbook, one of the primary publications for vocational rehabilitation professionals, devoted an entire chapter to this issue of pain (Andrew, 2000).

Additionally, knowledge of multi-cultural issues is a central function of rehabilitation counselors (Koch & Rumrill Jr., 1997). Rehabilitation counselors are being asked to meet the needs of a culturally diverse clientele, many of who use folk medicine, and other alternative and complementary therapies for chronic pain management.

Definition of Terms

Chronic pain: Chronic pain, on the other hand is constant, or flares up frequently, is difficult to define, and persists for more than six months (Kabat-Zinn, 1990, Mayo Clinic on Chronic Pain, 1999).

Complementary treatments and Alternative therapies are generally defined as: Therapies that complement conventional forms of medicine and are not readily available in hospitals or clinics, or are not generally covered by insurance. These terms may be used interchangeably to connote a therapy that is used to supplement conventional therapy.

Conventional therapies: The principal “Western-medical-model” (Keegan, p. 279, 1996). These therapies are consistent with the fundamental training of most primary physicians and other medical professionals in the United States. Additionally, these therapies are founded on scientific research models.

Statement of the Problem

The purpose of this study was to investigate the current attitudes and knowledge of vocational rehabilitation students about chronic pain and the use of alternative and complementary medicine for chronic pain management. Chronic pain has significant impact on vocational rehabilitation and may be the key to success or failure for an individual receiving vocational rehabilitation services. There is limited knowledge about the use of complementary therapies by persons with disabilities, or of their level of disclosure regarding the use of complementary therapies to rehabilitation counselors. The researcher sought information regarding vocational rehabilitation student’s attitudes and

knowledge of chronic pain, including the use of complementary therapies for chronic pain management.

Research Questions

Question 1: Is there a correlation between a student's gender and their personal experience with chronic pain?

Question 2: Is there a correlation between student's personal experience with chronic pain and the number of complementary treatments they report familiarity with?

Question 3: How important do students feel it is to be informed about complementary treatments for chronic pain management?

Question 4: How important do students feel it is to be informed about the possible risks of complementary treatments for chronic pain management?

CHAPTER 2

Review of Related Literature

Consumer Demand

There has been a paradigm shift in the use of complementary and alternative therapies in the United States and worldwide. A growing number of complementary therapies have recently been introduced in the United States. Shiflett (1998) noted that there might be as many as 200 to 300 unconventional therapies available in the United States. The global information network has introduced many of these therapies to the American public. Many are age-old modalities, used for centuries by indigenous peoples, and not well researched by western standards. These include: Yoga, Tai Chi, Acupuncture, herbal therapies, and massage.

Despite the concerns of some traditional practitioners a growing number of Americans are using complementary therapies. Eisenberg and et al., (1998) noted a paradigm shift in alternative medicine in America between 1990 and 1997. In 1990, 33.8 % of Americans used some form of complementary or alternative therapy; by 1997 their estimate increased to 42 %. Adults surveyed used alternative medicines specifically for chronic illnesses including back problems, arthritis, headaches, depression, and anxiety. Other researchers support these findings. Astin (1998) found 40% of responders used some type of alternative treatment within the past 12 months.

Eisenberg's seminal research (1993) showed a significant number of American's using complementary and alternative therapies without telling their physicians and illuminated the phenomenon of "Don't ask, don't tell." Although the use of

complementary and alternative therapies increased by 8 %, the disclosure rates in the studies varied little from 39.8% in 1990 to 38.5 % in 1997 (Eisenberg et al., 1998). This lack of open communication may contribute to serious drug interactions. Many Americans are unaware that there may be contraindications (reasons) why certain individuals should not use some complementary treatments.

Narcotic medications are not the only treatments to pose threats to consumers. Moreover, there can be life threatening drug interactions and side effects from complementary and alternative therapies (Eisenberg, et al., 1998). Conventional practitioners may be unaware of the variety of therapies used by their clients (Keegan, 1996). For example, without the knowledge of a client using a strong herbal therapy or a folk medicine, a physician might prescribe a medicine causing problems with interactions of pharmaceuticals and complementary therapies, and (Straus, 2000; Eisenberg, et al., 1993).

As the demand for complementary therapies grows, medical schools are recognizing the need for training in complementary and alternative therapies and bringing these therapies into the mainstream. A preponderance of medical schools in the United States offer courses in alternative therapies (Wetzel, Eisenberg, & Kaptchuk 1998). According to Eisenberg (1997), conventionally trained professionals need to use a proactive process to improve communication with consumers regarding the use or avoidance of alternative therapies. He suggests a step-by-step process to facilitate communication, referrals and provide documentation and follow-up for consumers (Eisenberg 1997).

Government Initiatives

Government officials recognized the increasing proliferation of complementary and alternative therapies in America, as well as the need for scientific research into the safety of these therapies. In 1992, the National Institutes of Health responded to consumer demand and Office of Alternative Medicine, now known as the National Center for Complementary and Alternative Medicine (NCCAM). The center's budget for 2000 was \$68.4 million (Straus, 2000). The National Institutes of Health has clearly defined the mission of the National Center for Complementary and Alternative Medicine (NCCAM). NCCAM is the Federal Government's lead agency for scientific research on complementary and alternative medicine. NCCAM's mission is to "explore complementary and alternative healing practices in the context of rigorous science, to train CAM researchers, and to inform the public and health professionals about the results of CAM research studies" (NCCAM Publication No. D516, May 2002, Retrieved November 7, 2002, from <http://www.nccam.nih.gov/health/whatiscam/#5>).

Additionally, there is a growing concern regarding inequality of care for racial minorities in the United States. In 1998, the United States government called for initiatives to eliminate racial and ethnic disparities. To address these concerns, NCCAM created a Strategic Plan to Address Racial and Ethnic Health Disparities (Retrieved September 26, 2001 from http://www.nccam.nih.gov/strategic/health_disparitis.htm).

Minority Research

Recent studies have shown a connection between ethnic minorities and the use of complementary treatments. In Keegan's (1996) study of 213 Mexican Americans, 44% of respondents had used one form of complementary therapy in the last year. These

included: herbal medicine, spiritual healing, folk healing, prayer, relaxation techniques, and chiropractic. Of these respondents, 60% did not report this usage to their primary physician (Keegan 1996). This lack of open communication regarding complementary treatments may be due to cultural and language barriers, which are increasing in our multi-cultural environment (Keegan 1996). Additionally, cultural bias may exist toward therapies that have not been thoroughly researched using conventional methods.

Vocational Rehabilitation Research on Minority Populations

Vocational Rehabilitation professionals are studying the specific rehabilitation needs of minorities. This includes the unique cultural aspects of folk medicine, and the need for professionals to be aware of cultural issues, as well as the use of unconventional therapies for disabling conditions. For example, Native American may use traditional medicine, including herbal therapies to deal with chronic disability (Braswell & Wong, 1994). Hispanics often seek out the services of traditional folk healers or Curanderos, who provide therapies that are in line with spiritual and cultural beliefs (Smart & Smart, 1994). Understanding these subtle cultural differences, including folk medicine, will be an important part of providing rehabilitation services to consumers from Latin American countries (Quinones-Mayo, Wilson, & McGuire, 2000).

The growing minority and emigrant population in America pose unique challenges for rehabilitation counselors. For example, Latino's are seen as similar in cultural values, yet there are many differences in language, and customs from one country to the next. Rehabilitation counselors need to be aware of all aspects of a customer's, psychological, and physical, and cultural background. Berven and Schofield (1987) noted that the acquisition of new skills is essential to the maintenance of

professional competence for vocational rehabilitation professionals (1987). Awareness and education regarding folk medicine, and the use of complementary treatments for chronic pain, may be an important component in the provision of culturally competent services. Rehabilitation counseling programs may afford the education needed for professionals to meet the needs of minority consumers.

CHAPTER 3

Methodology

Introduction

The purpose of this study was to investigate the current attitudes and knowledge of undergraduate students in rehabilitation classes regarding chronic pain management. Additionally, the investigator asked questions regarding the student's knowledge regarding use of complementary therapies for chronic pain management. This chapter outlines the methodology used to complete this study and the rationale for survey development. Lastly, this chapter illustrates the procedures used to collect, compile, and analyze the data.

Selection and Description of Sample

The subjects of this study were selected from undergraduate rehabilitation classes at the University of Wisconsin-Stout, Menomonie, Wisconsin. The researcher obtained permission from two instructors, and three different classes were surveyed in the fall semester of 2002. The students were given consent forms, and surveys were handed out immediately following the distribution of consent forms. Students were given a brief introduction to the purpose of the survey during class. They were asked to complete the survey and return it within the same class period. All participation was voluntary. The survey data was compiled at a computer center using the Statistical Program for the Social Sciences (SPSS). Data includes: demographic information, measures of central tendency, mean, median, and mode, as well as, variance and standard deviation.

Instrument

The instrument for this research project was a self-report survey developed by the principal investigator to collect information about current student attitudes and knowledge base regarding the use of complementary therapies for chronic pain management. A thorough review of the literature was conducted to locate any existing survey instrument. No existing survey on use of complementary therapies for chronic pain management was identified; therefore a new survey was created. A glossary of definitions of complementary treatments was attached to the survey to clarify any unfamiliar terms. Content for the questionnaire was developed from research on complementary therapies used for chronic pain management and rehabilitation counseling literature. Along with demographic information, the researcher sought information regarding student's attitudes regarding clients disclosing participation in alternative and complementary therapies for chronic pain management.

Data Collection

Student's participation in the survey was voluntary, and responses to the survey were confidential. A sample of convenience was used. Choice of subjects was restricted to the researcher's choice of class and instructor's consent.

Data Analysis

Research data was collected by the principal investigator and coded by an independent researcher using appropriate statistical methods. A total of 71 completed surveys were used in the data analysis.

CHAPTER 4

Results

Introduction

The purpose of this study was to investigate the current attitudes and knowledge of undergraduate students in rehabilitation classes regarding chronic pain management. This chapter will explain the results of the statistical analysis's that were used to address the research questions. Participants completing the survey were selected from undergraduate courses in vocational rehabilitation classes in the Department of Rehabilitation and Counseling at the University of Wisconsin-Stout campus. Initially, demographic information will be noted, followed by a breakdown of the research questions. Additionally, tables will be provided to illustrate the highlight the statistical results.

Demographics

A total of 71 surveys were used in statistical data analysis. A large majority of the participants were female, 77.1% (n=54) compared with, 22.9% (n= 16) males (1 unknown). Ethnicity of respondents was Caucasian, with 97.2% (n=69); 2 respondents declined to complete this part of the questionnaire. The survey respondents were primarily young, with the greatest number (76.1%; n=54) in the 18-22 year old age range. The rest of the survey participants fell in these categories: 14.1% of participants were in the 23-37 year old age range, 2.8% were in the 38-42 year old range, 5.6% were in the 43-47 year old range, and 1.4% were 48 or older. Survey results show that 54.9% (n=39) of respondents reported no personal experience with chronic pain, while 45.1% (n=32) reported personal experience with chronic pain.

Research Questions

Question 1: Is there a correlation between a student's gender and their personal experience with chronic pain?

Chi square (χ^2) analyses were conducted. Results indicated that there were no significant differences between males and females ($>.05$). A high percentage of survey participants (81.7%, n= 58) indicated familiarity with massage therapy as at treatment for chronic pain management. Respondents reported being least familiar with Humor Therapy and Biofeedback, (11.36%, n= 8) respectively. Table 1 illustrates ten treatments for chronic pain management, and indicates the frequency and percentage of respondent's familiarity with each treatment.

Table 1

Familiarity of Treatment Options

Treatment	Frequency (N=71)	Percent
Humor therapy	8	11.36%
Tai Chi	15	21.1%
Biofeedback	8	11.3%
Acupuncture	47	66.2%
Meditation	47	66.25
Massage therapy	58	81.7%
Yoga	49	69.0%
Herbs	34	47.9%
Hypnosis	32	45.1%
Chiropractic	63	88.7%

Question 2: Is there a correlation between student's personal experiences with chronic pain and the number of complementary therapies they report familiarity with?

Chi square (χ^2) analyses were conducted. Results indicated that there is a significant correlation between a respondent's personal experience with chronic pain and familiarity with these treatments: Acupuncture ($<.01$), Massage Therapy ($<.05$), Yoga ($<.05$), and Hypnosis ($<.05$). Table 2 indicates the treatments personally used by respondents for chronic pain.

Table 2

Treatment Options Personally Used

Treatment	Frequency (N=71)	Percent
Humor Therapy	4	5.6%
Tai Chi	32	45.1%
Biofeedback	3	4.2%
Acupuncture	32	45.1%
Meditation	8	11.3%
Massage Therapy	13	18.3%
Yoga	5	7.0%
Herbs	9	12.7%
Hypnosis	1	1.4%
Chiropractic	20	28.25

A majority of survey respondents 76.1% (n=54) reported having personal or professional experience with an individual who had chronic pain, and 23.9% (n=17) reported no experience. Fewer respondents 65.2% (n=45) indicated no personal affiliation with someone who used complementary treatments for chronic pain management. 34.8% (n=24) answered yes to this question, and 2 respondents left this part of the questionnaire blank. Table 3 indicates the method of training, frequency and percentage of training reported in the survey.

Table 3

Training in the Use of Complementary Treatments

Training	Frequency (N=71)	Percent
College Course	4	5.6%
Professional workshop	5	7.0%
Class at a clinic or hospital	5	7.0%
Read a book	5	7.0%

Note. 16.9% (N=12) of respondents reported receiving training in the use of complementary treatments for chronic pain management.

Overall, it appears that minimal training on the use of complementary treatments for pain management was provided to respondents. The vast majority of survey respondents (83.1%; n=59) indicated that they have not received training regarding the use of complementary treatments for chronic pain management. Identical statistical results were found regarding training on the risks of these treatments. Table 4 provides a breakdown of the number of participants who indicated that that has received training, including the methods of training provided.

Table 4

Training in the Risks of Complementary Treatments

Training	Frequency	Percent
College course	6	8.5%
Professional workshop	3	4.2%
Class at clinic or hospital	4	5.6%
Read a book	2	2.8%

Note. 16.9% (N=12) of respondents reported receiving training in the risks of complementary treatments for chronic pain management.

Question 3. How important do students feel it is to be informed about complementary treatments for chronic pain management?

Table 5 indicates the importance placed on training about complementary treatments and risks of these treatments.

Table 5

Information on Complementary Treatments for Chronic Pain

Treatment	Frequency (N-71)	Percent
Not important	1	1.4%
Somewhat important	20	28.2%
Very important	50	70.4%

Question 4. How important do students feel it is to be informed about the possible risks of treatments for chronic pain management?

Table 6 indicates the importance placed on training about complementary treatments and risks of these treatments.

Table 6

Information on Risks of Complementary Treatments

Treatment	Frequency (N-71)	Percent
Not important	1	1.4%
Somewhat important	10	14.1%
Very important	60	84.5%

CHAPTER 5

Discussion

Limitations

Survey data was limited to the racial, ethnic, and cultural make up of the undergraduate students who completed the questionnaire. There were no ethnic minorities represented in the survey respondents. A sample of convenience was used for data collection purpose. Additionally, the information was gathered at a small, rural campus, in the Midwest. Consequently, results may not be generalizable to populations outside of undergraduate students, currently enrolled in rehabilitation classes at the University of Wisconsin-Stout.

Conclusions

The purpose of this study was to investigate the attitudes and knowledge base of undergraduate students in rehabilitation classes regarding chronic pain and the use of complementary treatments for pain management. As this researcher has noted, chronic pain is growing problem in America. Although this survey is a small regional sample, it shows that chronic pain is a serious problem, one that warrants further research. Of the 71 survey respondents, 45.1% said they had experienced chronic pain. This is especially noteworthy considering that the principal age of survey respondents was 18-22 (76.1%).

Chronic pain is often seen as an issue related to disability and aging. College students are not traditionally viewed as having chronic pain. It is surprising that a high number of young adults in the survey had personal experience with chronic pain. Some possible reasons can be proposed. For example, students in rehabilitation classes may have chosen to take these classes because they had personal experience with disabling conditions.

Students may have experienced chronic pain because of car accidents, illness, or sports injuries. Additionally, the high stress levels in college, and American society as a whole, may contribute greatly to chronic pain issues. Further research into the reasons for chronic pain in young adults is warranted.

Chronic pain is often a hidden problem, and may be an issue that individuals are reluctant to mention to family or friends. This may impact the awareness of chronic pain in the community at large, and could account for only 76.1% of survey respondents knowing someone personally who had chronic pain.

The results of this study suggest that chronic pain is an important area of study for vocational rehabilitation professionals. A growing number of individuals with chronic pain are using complementary treatments for pain management. The results of this study suggest that rehabilitation-counseling students lack information regarding this issue. A majority of survey respondents (70.4%) reported feeling that it was very important to be informed about complementary treatments for chronic pain. Additionally, more respondents (84.5%) felt it was very important to be informed about the risks of complementary treatments.

Although complementary therapies such as folk medicine are not typically included in rehabilitation counselor course work, efforts should be made to include it into current curriculum. Recent initiatives for rehabilitation professionals encourage counselors to incorporate the client's cultural background in the counseling relationship (Mpooffu & Conyers, 2002). Educational initiatives addressing cultural competency could include information on cultural attitudes related to disability and pain, as well as the use of complementary therapies.

References

- American Chronic Pain Association. (2002). *What is Chronic Pain?* Retrieved November 6, 2002 from the American Chronic Pain Association Website:
<http://www.theacpa.org/whatispain.htm>
- Andrew, J. (2000). *The Disability Handbook: Two thousand edition*. Fayetteville, Arkansas: Department of Rehabilitation Education and Research, University of Arkansas.
- Arnst, C., Licking, E., & Barrett, A. (1999, March. 1). Conquering pain, new discoveries and treatments offer hope. *Business Week Online*. Retrieved November 6, 2002 from [http:// search.businessweek.com/search97cgi/s97_cgi?action=filterSearch&filter=bwfilt.hts&QueryText=Conquering+pain%2C+new+discoveries+and+treatments+offer+hope&x=18&y=11](http://search.businessweek.com/search97cgi/s97_cgi?action=filterSearch&filter=bwfilt.hts&QueryText=Conquering+pain%2C+new+discoveries+and+treatments+offer+hope&x=18&y=11).
- Astin, J.A., (1998). Why patients use alternative medicine. *Journal of American Medical Association*, 279(19), 1548-1553.
- Berven, N., & Scofield, M. (1987). Ethical responsibility in establishing and maintaining professional competence, *The Journal of Applied Rehabilitation Counseling*, 18(4), 41-44.
- Bishop M., Chou, C., Chan C., Rahaimi, M., Chan F., & Rubin S., (1999). Wellness promotion for people with disabilities in private-sector rehabilitation: A conceptual and operational framework. *Journal of Rehabilitation Administration*, 24(2), 57- 70.
- Braswell, M. E., & Wong H. D., (1994). Perceptions of rehabilitation counselors regarding native American healing practices, *Journal of Rehabilitation*, 60(2), 33-37.

- Easthope G., Trantner B., & Gill G. (2000). General practitioners attitudes toward complementary therapies. *Social Sciences & Medicine*, 51, 1555-1561.
- Eisenberg, D. M. (1997) Advising patients who seek alternative medicine. *Annals of Internal Medicine*, 127, 61-69.
- Eisenberg, D. M., Kessler, R. C., Foster C. Norlock, F. E., Calkins, D. R., & Delbanco, T. L. (1993). Unconventional medicine in the United States: Prevalence, costs, and patterns of use. *New England Journal of Medicine*, 328, 245-252.
- Eisenberg, D. M., Davis, R. B., Ettner, S. L., Appel, S., Wilkey, S., Rompey, M., & Kessler, R.C. (1998) Trends in alternative medicine use in the United States, 1990-1997. *Journal of American Medical Association*, 280(18), 569- 575.
- Jamison, N. (1996). *Mastering chronic pain: A professionals guide to behavioral treatment*. Professional Resource Exchange, Inc.
- Johnson, K (1999). Chronic pain: A biosocial disability. In F. Chan and M. Leahy (Eds.), *Health care and disability management* (pp. 623 - 638). Lake Zurich, IL: Vocational Consultants Press.
- Kabatt-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness* (1st ed.). Bantam Doubleday Dell Publishing Group, Inc. New York, New York.
- Keegan, L. (1996) Use of alternative therapies among Mexican Americans in the Texas Rio Grande Valley The delivery of culturally sensitive health care to Native Americans: *Journal of Holistic Nursing* 14(4), 277-290.

- Koch, L., & Rumrill Jr., P. (1997), Rehabilitation counseling outside the state agency: Settings, roles, and functions for the new millennium, *The Journal of Applied Rehabilitation Counseling*, 28(4), 9-14.
- Krauss H.H., Godfrey C., Kirk, J., & Eisenberg D.M., (1998). Alternative health care: Its use by individuals with physical disabilities. *Archives of Physical Medicine and Rehabilitation*, 79(11), 1440-1470.
- LaPlante, M.P., & Carlson, D., (1996). *Disability in the united states: Prevalence and causes, 1992.* Retrieved April 14, 2001 from the Disability Statistics Center Web site: <http://www.dscucsf.edu/UCSF/pub.taf?grow=3>
- Mayo Clinic. (1999). *Mayo clinic on chronic pain* (1st ed.). New York, NY: Kensington Publishing Corporation.
- Mpoffu, E., & Conyers, L. (2002). Application of tokenism theory to quality enhancement in rehabilitation services: *Journal of Applied Rehabilitation Counseling*, 33(2), 31-38.
- Pharmacy and Business Practice. (2002). Improving services for black and ethnic minorities: *National Pharmaceutical Association* Retrieved April 14, 2001 from the World Wide Web: <http://www.atalink.co.uk/npa/html/po92.htm>
- Quinones-Mayo, Y., Wilson K., & McGuire, M. (2000). Vocational rehabilitation and cultural competency for Latino populations: considerations for rehabilitation counselors. *Journal of Applied Rehabilitation Counseling*, 31, 19-25.
- Schiflett, C. (1998). Overview of complementary therapies physical medicine and rehabilitation. In G. Kraft, R. Schulman, A. Cotter & R. Harmon (Eds.), *Physical*

Medicine and Rehabilitation Clinics of North America 10(3), 521-529.

Philadelphia, PA: W.B. Saunders and Company.

Smart, J., & Smart, D. (1994). The rehabilitation of Hispanics experiencing acculturation stress: implications for practice, *Journal of Rehabilitation*, 60(4), 8-11.

Straus, S. (2000). *Testimony before the House of Lords, United Kingdom* Retrieved April 6, 2001 from the World Wide Web:

<http://nccam.nih.gov/nccam/ne/testimony/houseoflords.htm>

Thomas, W. (2001, March 1). Millennial medicine: Back to the past. *Alive Magazine:*

Canadian Journal of Health and Nutrition, 221, 86-87.

Vickers, A. (1993) *Complementary Medicine and Disability, Alternatives for people with Chronic Conditions* (1st ed.). London: Chapman & Hall.

Wetzel, M.S., Eisenberg D. M., & Kaptchuk, T. J. (1998). Courses involving complementary and alternative medicine US medical schools. *Journal of the American Medical Association*, 280, 784-787.

Appendix A: Information And Consent Form

My name is Janna Hanson-Parkes, and I am a graduate student at the University of Wisconsin-Stout. I am conducting a research study of chronic pain and the use of complementary therapies for chronic pain management. I am surveying under graduate students in vocational rehabilitation courses at the University of Wisconsin-Stout. The purpose of this study is to assess student's knowledge, attitudes, and experience regarding chronic pain and the use of complementary therapies for pain management.

Your participation is strictly voluntary and will require less than 15 minutes of your time. Whether or not you choose to participate will have no bearing on your grade in this course. The information will be coded to protect the identity of the participants.

Before completing the questionnaire, I would like you to read and then sign this consent form indicating that you understand the possible risks and benefits of participation, and your rights as a participant.

Consent Form

There are inherent risks in any type of research. Although the risks of this study are minimal, it is essential that you be aware of them. When answering questions on the survey, you may experience distress. You have the right to choose not to answer any questions that are too personal or cause you discomfort. Although the results of this study may be of benefit to others in the future, there is no direct benefit to you by participating in this study.

I understand that by completing this questionnaire, I am giving my informed consent as a volunteer in this study. I am aware of the fundamental nature of the study and agree that any potential risks are exceedingly small. I also understand the potential benefits that may be gleaned from the successful completion of this study. I am aware that the information is being sought in a specific manner so that no identifiers are needed and therefore my comments remain anonymous. I realize that I have the right to refuse to participate, and that my right to withdraw from participation at any time during the study will be respected with no coercion or prejudice.

Note: Questions or concerns about participation the research or subsequent complaint may be addressed to the researcher Janna Hanson-Parkes at hanson-parkesj@post.uwstout.edu or the research advisor Dr. Kathleen Deery at deeryk@uwstout.edu or (715-232-2233. You may also contact Dr. Janice Coker, Chair, UW-Stout Institutional Review Board for the Protection of Human Subjects in Research at cokerj@uwstut.edu or (715) 232-2239.

Signature: _____

Date: _____

Definitions

Definitions of Complementary Therapies (from Mayo Clinic on Chronic Pain, 1999).

Humor Therapy

Founded on the belief that laughter acts like an anesthetic; it promotes the release of chemicals that stop pain messages and help reduce pain.

Massage Therapy

An ancient form of health care; massage therapy is known to induce a state of deep relaxation, increasing the body's production of natural painkillers.

Yoga

5,000-year-old practice that includes breathing, movements, and postures; yoga purports to achieve a union of mind, body and spirit, which may lessen chronic pain by reducing stress.

Biofeedback

Uses electrodes to monitor body functions, such as muscle tension, brain waves, temperature and heart rate; the objective of biofeedback is to induce relaxation and help individuals cope with pain.

Tai Chi

Originating in China, this ancient form of martial arts involves gentle movements and deep breathing, described as "Moving meditation," and is said to lessen pain by reducing stress.

Acupuncture

Insertion of needles into the body to remove blockages in the meridians and increase the flow of chi; acupuncture is said to promote healing and lessen pain. Acupuncture is one of the most studied of unconventional therapies used for chronic pain.

Hypnosis

Hypnosis is an ancient way to promote healing that produces a state of deep relaxation. Increasingly, physicians, psychologists, and mental health professionals are using hypnosis to treat chronic pain.

Meditation

A technique used to calm the mind, originating from a diverse array of religions and cultures. Meditation is known to induce deep relaxation and may lessen chronic pain.

Chiropractic

Chiropractic medicine is founded on the belief that conditions, including chronic pain are related to problems in joints. Chiropractors manipulate joints by "adjusting" them.

Herbal Supplements

Many herbal products claim to reduce pain; not regulated by the Food and Drug Administration, they may pose risks to consumers.

Survey Questionnaire

Chronic Pain: Pain that persists more than 6 months.

Complementary and Alternative Treatments: Therapies that complement conventional forms of medicine and are not readily available in hospitals or clinics, or are not generally covered by insurance.

1. What is your age?

_____ 18-22 _____ 23-37 _____ 38-42 _____ 43-47 _____ 48 +

2. Are you _____ Male _____ Female

3. Do you describe yourself as (optional): _____ Caucasian _____ Asian

_____ African American _____ Hispanic _____ Native America

4. Have you personally experienced chronic pain?

_____ Yes _____ No

5. Have you known anyone personally or professionally who had chronic pain?

_____ Yes _____ No

6. Do you know anyone who is using complementary treatments for chronic pain management?

_____ Yes _____ No

7. I am familiar with this treatment option for chronic pain management.
(Check all that apply).

Humor Therapy _____	Massage Therapy _____
Tai Chi _____	Yoga _____
Biofeedback _____	Herbs _____
Acupuncture _____	Hypnosis _____
Meditation _____	Chiropractic _____

8. Which treatments have you personally used for chronic pain management?
(Check all that apply).

Humor Therapy _____	Massage Therapy _____
Tai Chi _____	Yoga _____
Biofeedback _____	Herbs _____
Acupuncture _____	Hypnosis _____
Meditation _____	Chiropractic _____

9. Have you received any training related to the use of complementary treatments for chronic pain management?

_____ Yes _____ No If yes, where: (Check all that apply)

_____ College Course
 _____ Professional Workshop
 _____ Class at Clinic or Hospital
 _____ Read a Book

10. Have you received any training about possible risks of complementary treatments for chronic pain management?

_____ Yes _____ No If yes, where: (Check all that apply)

_____ College Course
 _____ Professional Workshop
 _____ Class at Clinic or Hospital
 _____ Read a Book

11. How important is it for rehabilitation professionals to be informed about complementary treatments for chronic pain management?

_____ Not important _____ Somewhat important _____ Very important

12. How important is it for rehabilitation professionals to be informed about possible risks of complementary treatments for chronic pain management?

_____ Not important _____ Somewhat important _____ Very important

Thank you for taking the time to answer this survey questionnaire.

If you have any questions or comments you can reach me at hanson-parkesj@post.uwstout.edu