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Physician Knowledge and Use of Exercise is Medicine™

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PHYSICIAN KNOWLEDGE AND USE OF EXERCISE IS MEDICINE™

by

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B.S., Millikin University, 2009

A Research Paper

Submitted in Partial Fulfillment of the Requirements for the
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Department of Kinesiology
Southern Illinois University Carbondale
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RESEARCH APPROVAL

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CHAPTER 1

INTRODUCTION

Obesity is defined as a body mass index (BMI) of 30 kg/m^2 or greater. In recent years, some astounding statistics regarding obesity rates in the United States have emerged. Approximately 3.8 million people in the United States are over 300 pounds. In addition, over 400,000 people carry an astounding 400 pounds of body weight. Research has shown that between the years of 1962 and 2000, Americans that were obese grew from 13% to a frightening 31% of the population (Moreno, 2011). Looking at mortality data, there is evidence to suggest that being overweight strongly correlates to a greater incidence of chronic disease. Thus it is not surprising that the U.S. Surgeon General reports obesity being accountable for 300,000 deaths every year (Moreno, 2011). Similarly, individuals who do not engage in regular physical activity have a higher incidence of chronic disease. Exercise has been shown to be a treatment for obesity as well as many of the chronic diseases that are prevalent in today's society. Consistent regular exercise is associated with a decline in the development of many metabolic risk factors associated with chronic diseases (Peterlla, Koval, Cunningham, & Paterson, 2003). The National Academy of Sciences has suggested that everyone attempt to engage in at least an hour per day of physical activity. Not only does habitual exercise help in weight loss, it decreases ones risk for numerous chronic diseases and conditions. Exercise can ward off disease, decrease heart disease, prevent stroke and type II diabetes,

lower back pain, and also erase osteoporosis (Centers for Disease Control and Prevention, 2009).

In a utopian world if someone was over weight and wanted to change it, for any number of reasons a doctor would be able to just give them an “exercise pill” and the problem would be solved. In all reality, the perfect little pill is exercise and physical activity itself. Prescribing exercise and promoting physical activity is the answer. However, based on clear scientific evidence, the obesity epidemic continues to increase, and it appears that doctors are either not prescribing exercise to stop this, or their efforts are not effective (Sallis, 2008). Generally, the doctor is someone who you can trust, and usually what they have to say can be listened to and believed, as they are a valued source when it comes to health related issues (Lobelo, Duperly, & Frank, 2009). The primary care physician should be able to recognize over the years with reoccurring visits that a certain person is gaining weight, whether it be healthy or not. A study done by Petrella and colleagues (2003) looked at 284 healthy patients in a randomized control study run over a 12 month period. The research discusses the impact that exercise and physical activity can have on increasing a healthy lifestyle. They recognized that primary care physicians do have that regular contact with a large percentage of the population and they should be promoting exercise and awareness. With their research, they found that the primary care physician can not only increase their patients’ confidence with exercise but also their general health with exercise prescription. The study goes on to state that the physicians are talking less about exercise that promotes a healthy lifestyle when compared to other behaviors. When the problem is first recognized, it should be a priority of this health professional to suggest, encourage, and see that their patient is at a

healthy body weight, in other words, physicians should be prescribing exercise. Doctors have an ethical obligation to prescribe physical activity, and offer some type of exercise related counseling (Lobelo, et. al, 2009). Individuals need their doctors to be a reliable source with whom they can confidently discuss their issues of unhealthy weight concerns and health problems (Marshall, Smith, Bauman, & Kaur, 2005). In health care settings, more should be done to encourage physical activity and exercise as a treatment for obesity and many chronic diseases. There is overwhelming research supporting the benefits of exercising or getting regular physical activity when it comes to preventing chronic diseases. Many can see physical activity as a vaccine more or less to avoid chronic diseases and even an early death caused by inactivity (Sallis, 2008). Pedersen & Saltin (2005) have found evidence that a person who has a more physically active daily lifestyle can protect themselves against some forms of cancer. Physical inactivity is increasingly on the rise, becoming an overwhelming public health problem and is associated with a range of chronic diseases and health setbacks (Exercise is Medicine (EIM), 2008).

When most people think about self image and weight, it is mainly because they are concerned with themselves and what they think they should look like (Lox, Ginis, & Petruzzello, 2006). People are often their own biggest critics, and a common factor influencing their self image is weight. There is no denying that self image, referring to the intellectual picture we shape of our body plays a major role in society today (Lox et. al, 2006). How one sees them self in the mirror is important to how they may feel. It is easy to say, if you look good, you then feel good. However, a majority of the population in the United States has a hard time giving themselves compliments in the mirror because

about 34 million people are overweight today (Van Itallie, 2006). It would be even harder to compliment themselves, saying that their body looks great, when they are overweight (Lox et. al, 2006). Being comfortable in your own skin is a powerful undertaking, when one recognition is that you are one hundred pounds over a healthy weight for your body. With that being said, being “unattractive” is not just the problem. There is serious health risks associated with being overweight or obese. These dangers can affect a person’s well being and even ability to live. Recognition of this problem is the first step in trying to change the situation, and the first person to recognize that they are overweight or obese should be that person in their own skin. The second person that should be able to make an observable decision of the issue should be their primary care physician. It makes sense that health care providers should be able to make the observation and inform their patient. If the physician is not prescribing the physical fitness, then their patient should at least have the resources available to them to help themselves. Exercise is Medicine™ is a joint initiative by the American College of Sports Medicine and the American Medical Association that was designed to address this very issue (EIM, 2008). Given that a primary care physician or other allied health professional is often seen as the expert in all health-related matters, it is critical to understand how aware these individuals are about the Exercise is Medicine website.

Considerable knowledge has been accumulated about chronic diseases and their effects on the human body, and even how they may be prevented. This understanding is also true for obesity. In an attempt to address the obesity and chronic disease epidemic in the United States, the American College of Sports Medicine (ACSM) and the American Medical Association (AMA) launched the initiative Exercise is Medicine™ in 2007 to

bring a greater spotlight on physical activity and also exercise in the home and health care environments (EIM, 2008). Their hopes by launching this initiative and providing an abundance of resources on this website was to encourage physicians to consistently assess physical activity as a vital sign during a checkup and then follow that assessment up with a specific exercise prescription and/or referral to an exercise professional.

Measuring that amount of physical activity in their patients lives according to the AMA should be equally as important as evaluating their blood pressure and temperature when one steps into the doctor's office. The intent in creating Exercise is Medicine™ was, among other reasons, to bring the overwhelming research supporting the health benefits of exercise to the medical community and, through them, disseminate it to the general population.

The opening World Congress on Exercise is Medicine™ was held in June 2010 to spread the need to address the importance of exercise and physical activity (EIM, 2008). Exercise is Medicine™ is dedicated to the idea that exercise and physical activity are essential in the prevention and healing of diseases. The development of this website was to push exercise being regularly evaluated as a component of all medical care. By constructing an expectation amongst the public and physicians that their health care providers ought to and will raise questions about and even prescribe exercise was one of the goals they had in mind with Exercise in Medicine™ (EIM, 2008). This initiative established a website and campaign to market the materials designed to provide physicians, as well as exercise professionals, the general public, and media with the details of the initiative. Everything needed to utilize Exercise is Medicine™ is available through this highly user friendly website. To date, there has been no attempt to assess or

understand how efficiently Exercise is Medicine™ has been promoted or received by the medical community since its launch. With marketing, comes knowledge, and knowledge presents usage.

Statement of Purpose

The purpose of this study is to determine the knowledge and awareness of allied health care professionals of Exercise is Medicine™. Exercise professionals (ACSM members specifically) are frequently bombarded with Exercise is Medicine™ marketing material. This has even included an Exercise is Medicine™ on Campus initiative; however, Exercise is Medicine™ is a joint initiative with the American Medical Association. Therefore, this study was designed to determine if the American Medical Association is as successful at marketing Exercise is Medicine™ to health care professionals. Therefore the primary purpose of this investigation is to determine the knowledge and use of Exercise is Medicine™ by physicians in the southern Illinois region. Specifically, this study targeted physicians' awareness of the initiative and their self-reported they adoption of monitoring physical activity as a vital sign.

Hypothesis

It was hypothesized that allied health care professionals are unaware of the health care tool Exercise is Medicine™.

Significance of Study

Results from this study should help to illustrate the impact of Exercise is Medicine™ has on the practice of allied health care professionals in southern Illinois. The benefits from exercise are overwhelming (Fernandez, Garcia, Alvarez, Giron, & Aguirre-Jaime, 2007). Ultimately, a significant portion of the United States population needs to exercise to become healthy again. The doctors should in actuality be prescribing exercise to their patients as medicine. If doctors were to actually prescribe exercise to their patients, then maybe America would begin to see a change in outstanding weight issues. However, with recent studies it has been shown that physical fitness is not the easiest thing for doctors to try and control. Physicians are not able to constantly monitor their patients' activity level, which creates an issue of patient adherence (Fernandez et. al, 2007).

Research shows that physicians have not counseled or even monitored patients who should be provided physical activity advice (Petrella et. al, 2003). If patients are looking to their doctors for help, why is the help not then being given? Petrella and colleagues (2003) state that the physicians are talking less about exercise compared to other behaviors that may promote healthy behaviors. Why aren't doctors telling their patients that they are overweight and it is unhealthy for themselves and their body? Why are doctors not telling their patients that they are putting their wellbeing at stake? Why are the doctors more prevalently not showing to their patients all the risks involved with being so overweight? There could be numerous reasons as to why exercise is not given a second thought. One of these reasons includes a lack of training and being able to provide guidance (EIM, 2008). If the primary care physician is not comfortable

prescribing exercise, then they should refer or suggest that their patient look into working with a personal trainer for assistance. The values of this promotion can greatly improve disease prevention and give way to necessary treatments such as exercise prescription to the individuals who are not only looking for it, but also need it most (Sallis, 2008).

Delimitations

The delimitations of this study are that the research will be focused only in southern Illinois, which refers to the surrounding health care centers in Carbondale, Illinois

Limitations

The primary limitation of this research is the limited sample that has been chosen.

CHAPTER 2

METHODS

This study examined the knowledge of Exercise is Medicine™ in physicians and allied professionals in southern Illinois. A questionnaire was designed to assess physicians' familiarity with Exercise is Medicine™ as an instrument in health care, frequency use, and willingness to use it once they did find out about it, as exercise prescriptions for almost every condition are provided at ExerciseisMedicine.org. All methods in this investigation were approved by the Human Subjects Committee of Southern Illinois University (Appendix B).

Sample of participants

Data was collected from primary care physicians who are currently practicing in the southern Illinois region. Approximately 50 physicians and health professionals were used for this research. Demographic information was considered for data collection (Appendix A). Some possible mediating factors were not addressed as part of this exploratory study, including level of training that the physician has on exercise counseling. The Physician Relations departments within Southern Illinois University Health Center and Shawnee Health Care Systems sent the surveys to their physicians via email. The accompanying email explained that all information provided would be anonymous with data collection and analyzing. The amount of participants for this particular study was limited to just the southern Illinois area.

Instrument/ Apparatus

Physicians were sent a brief questionnaire (Appendix A) inquiring about their knowledge on Exercise is Medicine™. The questionnaire was developed specifically for use in this study. Doctors from the Southern Illinois University Health Center and Shawnee Health Care System were sent the questionnaires from their Physician Relations department. A reminder e-mail was sent out two weeks later to the same physicians who had received the original questionnaire survey email. They were instructed to ignore the email if they have already completed the survey online through SurveyMonkey™. There were two basic parts to the survey. The first was a demographic section, and the second assessed knowledge/awareness of Exercise is Medicine™. Responses were given on a multiple choice response format in order to encourage faster response.

Data Collection Procedures

Data was collected over a three month period, as to allow for doctors to have enough time to complete the survey. The responses to the survey were collected and analyzed through SurveyMonkey™ database.

Data Analysis Procedures

Basic descriptive statistics (i.e., frequencies) were calculated for the data. The idea behind this was to organize the opinions of primary care physicians. Also, a correlation between previous knowledge and usage of Exercise is Medicine™ planned. However results showed that this analysis was not viable, due to low response rates regarding Exercise is Medicine™.

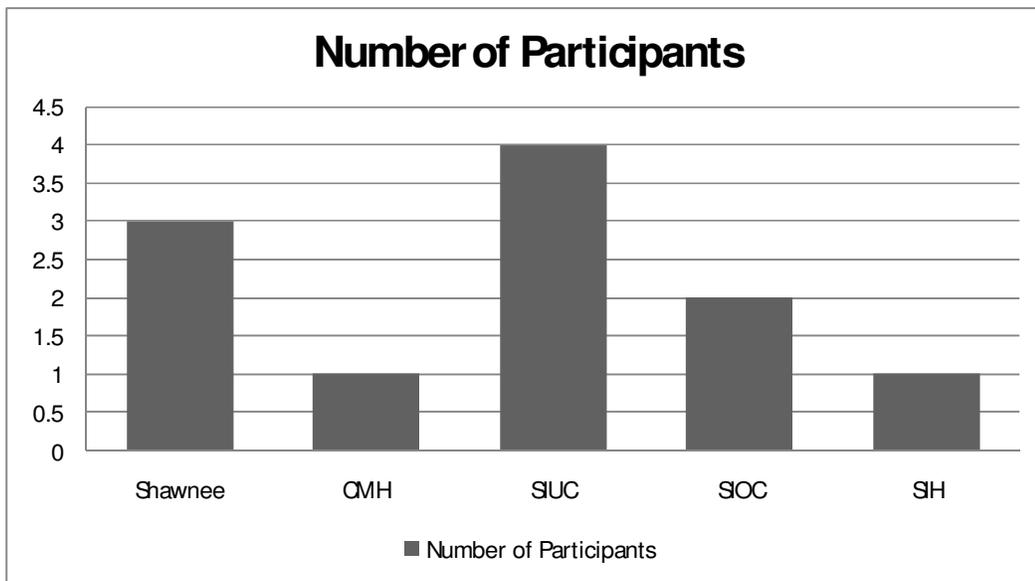
CHAPTER 3

RESULTS

Fifty surveys were distributed through email to the surrounding allied health professionals in the southern Illinois area. We found that all participants who did respond reported no knowledge about Exercise is Medicine™, and therefore were not using the website. There were a total of 11 respondents (22% response rate) to the questionnaire survey through SurveyMonkey™ as seen in Figure 1. The findings may indicate several things. For one, that the American Medical Association along with the American College of Sports Medicine have not marketed Exercise is Medicine™ adequately to health care individuals, or it could also just be for the southern Illinois area.

In summary, each participant who did respond to the questionnaire completed eight questions within the survey (Appendix A). To complete the task it only took physicians less than five minutes in total. With all the responses it is shown in figure 1 that that allied health care professionals in the general region of southern Illinois (Figure 2) have no knowledge about Exercise is Medicine™.

Figure 1

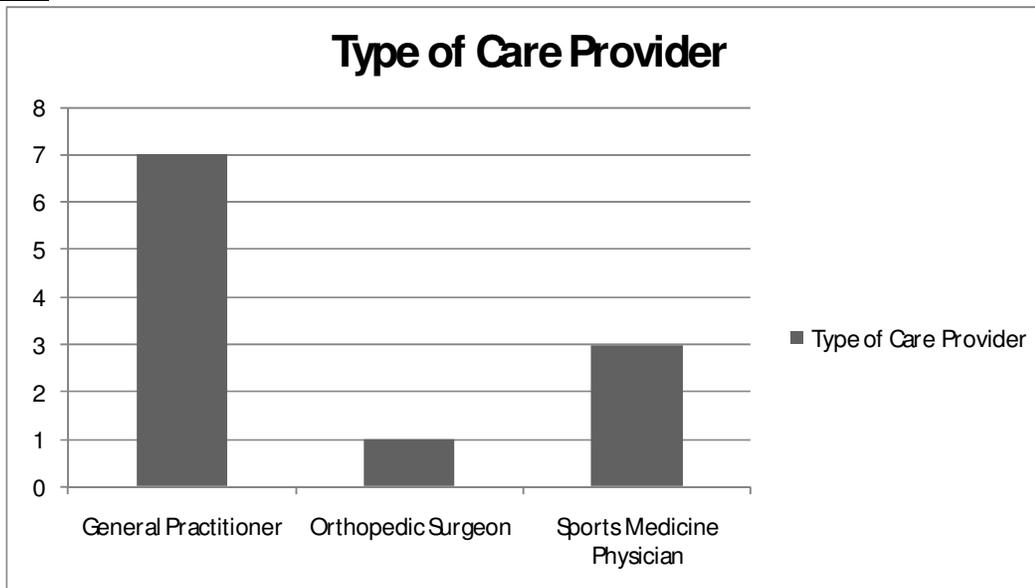


Key- Shawnee- Shawnee Health Service CMH- Carbondale Memorial Hospital

SIUC- Southern Illinois Health Center SIOC- Southern Illinois Orthopedic Center

SIH- Southern Illinois Hospital

Figure 2



CHAPTER 4

DISCUSSION

Although Exercise is Medicine™ was a joint initiative launched by the American College of Sports Medicine and the American Medical Association in 2007, this small sample of physicians makes it clear that the AMA is not marketing the initiative to physicians effectively. As their mission Exercise is Medicine™ wants exercise to be one of the most important discussions occurring in the doctor's office (EIM, 2008), and these results suggest that this is still not occurring between the primary care physician and their patient. Our research has shown that out of the physicians responding to our survey none reported knowledge of Exercise is Medicine™. While these findings may be disappointing to the ACSM and AMA, it supports the hypothesis that allied health care professionals are unaware of the significant health care tool "Exerciseismedicine.org". Due to the lack of knowledge in the survey responses, assumptions can be made about lack of advertisement towards Exercise is Medicine™ therefore we were not entirely astonished to find that many physicians were unaware of this health care instrument.

Possible Contributors to Lack of Knowledge

As seen in Figure 1, there were only eleven respondents to the survey questionnaire sent out to physicians and other allied health care professionals. The low reply is consistent with Sheehan's (2001) research assessing survey response rate through electronic e-mail. She discovered that over the past fifteen years, as survey studies that use e-mail have gone up, the response rate to the surveys show a decline. The study's details report a mean average response rate in the mid 30% range. With responses put

aside, the present findings may be consistent with what Sallis (2008) found in his research that there is not enough exercise being prescribed to patients from their primary care physicians. He also talks about how little is currently being done to deal with the effects of inactivity on health and this needs to be changed. Exercise is Medicine™ has gathered support from many different national organizations who share the same feelings towards improving health and with more promotion and assistance they may all meet obtainable goal of making exercise prescription a priority in health care. The second World Congress on Exercise is Medicine™ is scheduled for June 2001 (EIM, 2008).

The Need for Prescription

The benefits of exercise are irrefutable, especially in preventing chronic diseases. There is an obvious need for adequate physician prescription of exercise (Sallis et. al, 2008). Pedersen and colleagues (2006) state that exercise is the key to decreasing the effects of many chronic diseases; they also stress how important it is that the patient who is being prescribed the exercise be tracked closely by their physician for a successful outcome. They also discuss how exercise is highly significant in the management of a wide variety of medical disorders, and in some cases can be just as effective as certain medicines. The beneficial association connecting exercise and health has been recognized dating back centuries. Somewhere along the lines, people stopped exercising and started gaining health troubles (Sallis et. al, 2008). The need for exercise prescription is apparent.

Physician use of Exercise is Medicine™

As you can see from Figure 2, the participants' demographic location can be distinguished with their place of employment, as they all reported being from the southern Illinois area. They also reported not knowing about Exercise is Medicine™. The initiative was launched to improve the wellbeing of America simply through the prescription of physical activity from doctors and health care providers. More should be done to address our nation's obesity problem, which is why the American College of Sports Medicine created Exercise is Medicine™. They need to continue to market Exercise is Medicine™, to gain more followers and share its knowledge with physicians, especially in the area of southern Illinois. The idea pushes to tackle the lack of physical activity and exercise taking over a majority of the population. Doctors are one of the most trusted individuals in many people's lives (Lobelo et. al, 2009), and if they are utilizing Exercise is Medicine™ and promoting exercise in their prescriptions we may start to see a change with our nation.

In future studies, the research should encompass a wider area of interest, not just limited to a few towns within one state. One of our limitations for this study was only research in the Southern Illinois area; therefore the research will need to be expanded to a wider demographic range if possible future research will be explored. There may be plenty of physicians with knowledge of Exercise is Medicine™, but they are just not presiding in the Southern Illinois area.

In conclusion, the results of the current study suggest that Exercise is Medicine™ is not being marketed to physicians and other allied health professionals the way that the American College of Sports Medicine had intended it to with their American Medical

Association partner. Nevertheless educational and beneficial, Exercise is Medicine™ is not being marketed enough in the Southern Illinois area for the population it is trying to target, such as physicians. The possibilities of this idea seem endless and with proper promotion from the American College of Sports Medicine and its partner the American Medical Association, Exercise is Medicine™ may start to get the use out of it that was intended.

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APPENDICES

Appendix A

1) At which one of these locations do you work?

Southern Illinois Hospital

Carbondale Memorial Hospital

SIU Health Center

Shawnee Health Service

Southern Illinois Orthopedic Center

2) What type of health care provider are you?

General Practitioner

Orthopedic Surgeon

Pediatric Practitioner

Sports Medicine Physician

Physical Therapist

Other (please specify what kind)

3) How Many years have you been practicing?

1-3 years

3-5years

5-8years

10+ years

4) Do you know about the website *Exercise is Medicine™*
(www.exerciseismedicine.org)?

If you answer “no”, please skip questions 5-8.

Yes

No

5) Do you use the website *Exercise is Medicine* TM? If you answer no, please specify why you don't and also skip question 7.

Yes

No

6) What sections of the website *Exercise is Medicine* TM have you used?

Health Care Providers

Health & Fitness Professionals

Public

Media

Globalization

Network

7) How did you learn about the website *Exercise is Medicine* TM?

American Medical Association

American College of Sports Medicine

The Internet

Colleague

Other (please specify)

8) How long have you known about the website *Exercise is Medicine* TM?

2008

2009

2010

2011

VITA

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