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MASTERCLASS

Clinical efficacy of *Guasha Therapy* for shoulder pain [Thesis].

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Indexing Terms: Guasha Therapy; carabao horn; community health; Philippines.

Introduction

The *Journal* is honoured to publish Dr Santos' thesis in full. It commences on the next page and runs as submitted, examined, and passed for the university award of Doctor of Complementary and Alternative Medicine (DCAM).

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TABLE OF CONTENTS

CHAPTER I

THE PROBLEM: RATIONALE AND BACKGROUND

This chapter presents provides the background of the study, objectives, hypothesis, significance and scope and limitation of the study

INTRODUCTION

Etiology

Shoulder injuries are most commonly caused by athletic activities that involve excessive, repetitive, overhead motion and arduous muscle activities such as swimming, basketball and tennis. Athletes with such activities present themselves with greater risk of occurrence of shoulder pain, thus, focusing the research on shoulder pain.

Shoulder pain is initially treated non-operatively. This includes rest, basic shoulder exercises, anti-inflammatory medications to help lessen the swelling and pain experienced by the patient, and the use of complementary and alternative medicine which includes the guasha therapy. According to a mobile application entitled "Guasha of Traditional Chinese Medicine", Guasha therapy is a developing management for shoulder pain. Its effectiveness had been established a long time ago in different countries, most especially in China. Individuals opt to use this therapy because it is cost-effective, have fewer side effects and can be performed by any individuals, even without medical background in the comfort of their homes. Chinese also believe that this therapy is completely safe and poses no risk of infection since it does not involve any invasive procedure such as puncturing the skin with a needle and the like. The therapy can be very useful in evaluating health, diagnosing symptoms, prevention of disease and treating illness.

Epidemiology

Pain is a personal experience described as an unpleasant sensory or emotional occurrence brought about by disturbing or noxious stimuli. One of the most common musculoskeletal complain of an individual is shoulder pain. It is interesting to note that a large percentage of the population seeks concern regarding shoulder pain. According to orthoinfo.aaos.org, in 2006 alone, 7.5 million individuals presented with shoulder pain. Majority of these individuals, consisting of 4.1 million people suffers from rotator cuff pathology. The prevalence of shoulder pain among individuals is relatively high since it involves strenuous and demanding muscle activities.

Background of the Study

Traditional and alternative forms of medicines have been utilized in the Philippines long before the wide spread use of pharmaceutical products. This is not limited to the use of herbal plants, but is also involved in the growing scope of the alternative medicines including the guasha therapy, acupuncture, ventosa, chiropractic medicine and taping medicines. This study aims to determine the clinical efficacy of the Philippine carabao horn used in guasha therapy in reducing the level of shoulder pain experienced by the athletes of University of Makati as compared to the use of spoon for the spoon therapy.

Guasha therapy can be applied to virtually any part of the body; however, there are certain strokes for each muscle and joint for it to become effective. The guasha therapy has gained popularity in the recent years, but there is paucity of studies and evidences of its use. The limited information available on the guasha therapy suggests improved function and decrease in the level of pain. Guasha therapy appears to have been proven effective and useful in other countries, despite these, the Philippines still lack knowledge, researches and clinical trials about the therapy.

Scraper tools from other countries are made up of ceramic plates, jade and ox horn. As observed by the researcher these raw materials are composed of protein called the keratin. The researcher performed a thorough study to find a material that is closely related to the composition of other scraper tool, wanting to utilize the available raw materials in the Philippines, the researcher decided to use the Philippine carabao horn.

STATEMENT OF THE PROBLEM

The main objective of this true experimental study is to evaluate the clinical efficacy of scraper tool made of Philippine carabao horn for shoulder pain which result will serve as a basis for proposed Guasha guidelines.

Specifically, this study attempted to answer the following questions.

1. What is the level of pain of the experimental group before and after guasha therapy in terms of:
    a. Shoulder pain and disability index (SPADI)
    b. Range of motion (ROM)
    c. Visual analogue scale (VAS)
2. What is the level of pain of the controlled group before and after spoon therapy in terms of:
    a. SPADI
    b. ROM
    c. VAS
3. Is there a significant difference between the level of pain of the experimental group before and after the guasha therapy in terms of:
    a. SPADI
    b. ROM
    c. VAS
4. Is there a significant difference between the level of pain of the controlled group before and after the spoon therapy in terms of:
    a. SPADI
    b. ROM
    c. VAS
5. Based on the findings of the study, what guasha guidelines can be proposed?

HYPOTHESIS

At the 0.05 level of significance, the following hypotheses were tested:

1. There is no significant difference between the level of pain of the experimental group before and after the guasha therapy.
2. There is no significant difference between the level of pain of the controlled group before and after the spoon therapy.

SIGNIFICANCE OF THE STUDY

The following individuals will be the major beneficiaries of the result of the research study:

Patients. The guasha guidelines that is to be developed by the end of this research can be of an additional instrument to help the patients opt for an alternative treatment aside from

pharmacologic and surgical procedures. In addition, by utilizing the scraper tool, which is cheaper, expenses on pharmaceutical products and medicines, can be lessened. Guasha therapy tool will serve as a non-pharmacologic, alternative or complementary therapy to patients to lessen their pain and discomfort. Moreover, since the therapy is a non invasive procedure, patients' anxiety will be minimized.

Guasha Practitioner. The output of study may serve as an additional input in diagnosing and treating the shoulder pain experienced by the patients. In this way, the proposed guasha guidelines that is to be developed by the end of the research can be of great assistance in delivery of care among the patients experiencing shoulder pain.

Complementary and Alternative Medicine students. This research will give the CCAM students a focused study with the said topic and would result into an increase knowledge regarding the alternative therapy. It can give insights for those students who want to increase their knowledge on this rare and unique type of complementary medicine. The researcher believes that through the proper amplification of this, students will improve, develop and coordinate skills for guasha practitioner.

Athletes and Coaches. Athletes and coaches are a huge population that can benefit from this research. With the help of guasha therapy, athletes and coaches themselves can apply the knowledge that can be established with this study. Pain is inevitable especially in individuals exerting muscle activities, with the help of the guasha guidelines; they can develop independence in terms of obtaining primary care during pain incident.

Future Researchers. Future researchers can benefit by using the available data as reference for their study. Revision of the same research is important because it strengthens the data gathered and allows it to be generalized. In addition, the future researchers may use the information that have been gathered in the research and further enhance it to come up with other findings other than the findings in this research .It can provide guidelines in administering guasha therapy in a safe and efficacious manner.

SCOPE AND DELIMITATION

The main objective of this true experimental study is to evaluate the efficacy of scraper tool made of Philippine carabao horn for shoulder pain which result will serve as a basis for proposed Guasha guidelines. The study will involve University of Makati athletes and students experiencing shoulder pain assessed through (1) pain onset prior to 150o of active shoulder elevation in any plane, (2) positive empty can test indicating possible supraspinatus involvement, (3) positive Hawkins-Kennedy test indication possible external impingement, (4) positive on TCM diagnosis on shoulder pain, (5) subjective complaint of difficulty performing activities of daily living and (6) age between 18 to 50 years old. The data needed by the study will be gathered for a period of one (1) month.

The study will be limited to the athletes who are experiencing shoulder pain. The study will also be limited to the respondents who will meet the criteria set by the researcher.

DEFINITION OF TERMS

Alternative Medicine – this refers to the treatment modalities used as a substitute for mainstream or conventional medicine.

Complementary Medicine – this refers to the use of therapies in addition to treatment offerings of conventional medicine.

Complementary and Alternative Medicine – this refers to the combined use of mainstream and alternative treatment modalities.

Guasha Massage Therapy – this refers to the stroking of the shoulder area of the client experiencing pain using a Philippine carabao horn that intentionally creates transitory therapeutic petechiae representing extravasations of blood in the sub cutis to lessen or decrease the pain level.

Qi – this Chinese term refers to the balance of forces inside the body.

Gua – this Chinese term means to scrape or rub.

Sha – the Chinese term used to describe blood stasis in the subcutaneous tissue before and after it is raised as petechiae.

Pain – this refers to the unpleasant sensory or emotional experience brought about by any disturbing sensation to a specific body part.

Site of pain – this refers to the specific anatomy and/or body system thought to be involved in the unpleasant sensory and emotional experience.

Shoulder pain – this refers to the site of pain experienced by the athletes. This type of pain can be due to an intrinsic shoulder problem, may be due to overused and/or misused of the area while performing athletic tasks.

Duration of Pain – this refers to the time quality of pain felt. This encompasses every time when the pain is felt and how long does the pain lasts and when the pain is not felt.

Intensity of Pain – this refers to the severity of pain felt as subjectively rated acc ording to a number scaling system by the client. It is particularly identified through a pain scale.

Pain Scale – this refers to an illustration used to classify the intensity of pain a patient experiences. This is a scale of 0 to 10 where the client chooses and rates the pain he feels from 10 as the highest and the most painful and 0 as the lowest and means no pain.

Mild Intensity – refers to the rate on the pain scale when it is from 0 to 3.

Moderate Intensity – refers to the pain scale when it is from 4 to 7.

Severe Intensity – refers to the pain scale when it is from 8 to 10.

Efficacy – this refers to the capacity on minimizing pain for beneficial change or therapeutic effect of guasha massage therapy on shoulder pain.

Guasha Treatment Guideline – this refers to a proposal that includes specific guidelines on the procedure of Guasha massage therapy together with the safety precautions concomitant to its usage.

CONCEPTUAL PARADIGM OF THE STUDY

FIGURE 1. THE SCHEMATIC DIAGRAM OF THE CLINICAL EFFICACY OF GUASHA THERAPY FOR SHOULDER PAIN

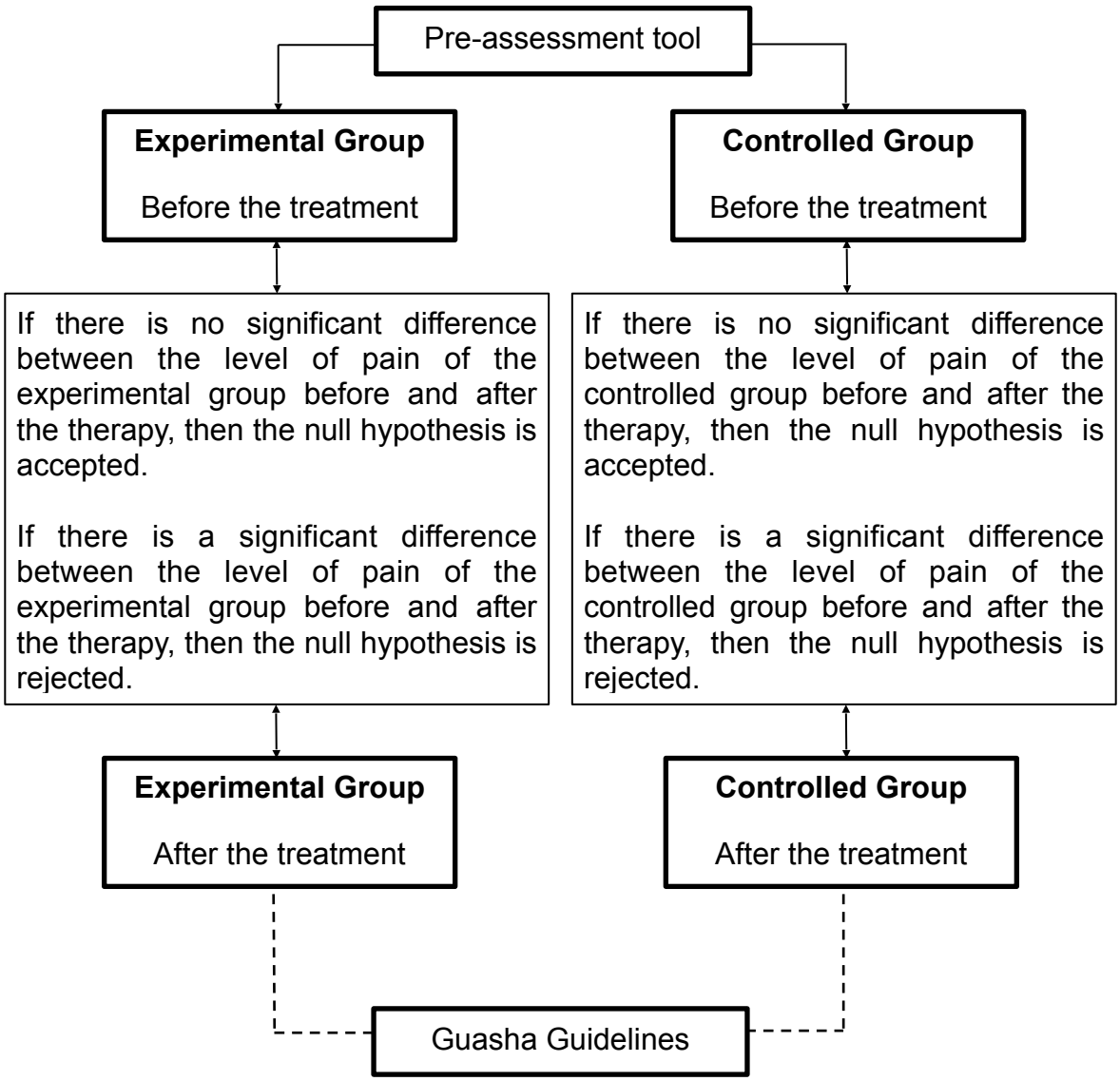

Figure 1 presents the conceptual paradigm of the study illustrating the efficacy of the Guasha therapy using a scraper tool made of Philippine carabao horn for shoulder pain.

It consists of eight receptacles and seven connectors. The first row box contains the pre-assessment tool that will identify the participants of the study. The second row box on the left contains experimental group before the treatment while the second row box on the right contains controlled group before the treatment. In between the second and third row box are the, if and then statement based on the hypotheses of the study. The third row box on the left contains

experimental group after the treatment while the third row box on the right contains controlled group after the treatment. The lower box contains the possible output, which is the guasha guidelines on the use of the scraper tool made of Philippine carabao horn.

The upper box is connected by a single headed arrow on the two groups, which indicates the possible participants of the study. The second, if and then statement and third row boxes are interconnected by a double headed arrow which indicates the possible significant difference of the experimental and controlled group before and after the therapy.

Lastly, the broken arrows are pointing the possible output of the study which is the guasha guidelines that will be proposed after the experimental study. This study provides a basis for the proposal of creating guasha guidelines for decreasing or alleviating pain because of shoulder pain.

CHAPTER II

RELATED LITERATURE

This chapter provides a review of local and foreign literatures and studies that will guide and direct the researcher in the conduct of his study. Moreover, this section provides information from books, journals and internet pertaining to several literatures and studies related to complementary and alternative medicine specifically guasha therapy and shoulder pain. The following literatures and studies gathered were found to provide good information that will help the researcher better understand from what perspective the proposed study will be undertaken. The results that will be gathered from this literatures and studies will provide insights to the researcher in the pursuit of this study.

REVIEW OF RELATED LITERATURE

This contains discussion on the relevant literatures on the variables Guasha therapy and shoulder pain that will contextualize the present study. It is presented as follows under several headings.

Complementary and Alternative Medicine

Complementary and Alternative medicine (CAM), with the definition provided by the Cochrane Collaboration as cited by Rees (2001), is a broad domain of healing resources that encompasses all health systems, modalities and practices and their accompanying theories and beliefs, other than those intrinsic to the politically dominant health system of a particular society or culture in a given historical period. CAM includes all such practices and ideas self-defined by their users as preventing or treating illness or promoting health and well-being.

Furthermore, the National Center for Complementary and Alternative Medicine (NCCAM) of the National Institutes of Health defines CAM as a broad range of healing philosophies, approaches and therapies. It generally is defined as those treatment and health care practices not taught widely in medical schools, not generally used in hospitals and not medically reimbursed by medical insurance companies.

Rees, (2001) mentioned that NCCAM now recognizes five major categories of CAM: alternative medical and traditional indigenous systems (Ayurvedic medicine, curanderismo, traditional oriental medicine and unconventional Western systems such as homeopathy and naturopathy); mind body interventions (mind-body systems and methods, bio-feedback, guided imagery, meditation, religion and spirituality; biologically based therapies (herbal medicine, special diet therapies, orthomolecular medicine); manipulative and body-based methods (chiropractic, osteopathy and reflexology); and energy therapies.

The World Health Organization, (2005) also said that for more than a decade, there has been an increasing use of complementary and alternative medicine (CAM) in many developed and developing countries. In line with increased international demand, the safety, efficacy and quality of the products and practices have become important concerns for both health authorities and the public.

The WHO Centre for Health Development, (2005) has been working in the area of traditional medicine to examine its valid contribution to health system development in the 21st century. It is envisaged that modalities of treatment in various systems of medicine- whether conventional, traditional, complementary or alternative, that have been proven to be effective and not harmful to people's health and well-being when used properly might contribute to improve access to preferred methods of healthcare in national health and welfare systems.

Complementary and Alternative Medicine in the Philippines

According to Lagaya (2005), the practice of traditional medicine in the republic of the Philippines is thought to have existed for hundreds of years, even before colonization of the Spaniards. The roots of traditional medicine appear to have originated from the practices of ethnic and indigenous groups of Filipinos.

At present, the Philippines government has established the master key for the development of traditional complementary and alternative medicine (TCAM), through the passage into law of the Republic Act No. 8423, the Traditional and Alternative Medicine Act of 1997. If TCAM is to boost the health care delivery system of the country, professionalization of practitioners and the legal practice of TCAM by both physicians and non-physicians are warranted. Such a move is now under way, focused initially on herbal medicine, massage therapy and acupuncture, where priority is given to training, research, standards and accreditation. The other TCAM modalities will follow, once acceptance of TCAM in general has been accomplished (WHO, 2005).

The department of trade and industry (DTI) promotes efficient marketing and distribution of local products and services. It seeks to expand and strengthen linkages among the country's small, medium, and large enterprises through information exchanges and market matching. It also conceptualizes, monitors, and evaluates programs, plans, and projects intended to create awareness of domestic marketing opportunities for new projects, new technologies, and investments.

It mandates to develop, strengthen, and promote the domestic market for MSMEs, ensure the rational, economical and steady flow of raw materials to production centers and increase domestic trade through marketing and efficient distribution of finished goods.

The DTI provides a catalogue that showcase a variety of indigenous raw materials used in manufacturing Philippine products. In a Philippine raw materials catalogue published in 2007, it features the uses of beads, carabao horns and bones, and seashells in manufacturing Philippine products (dti.gov.ph, 2014)

Guasha

According to Nielsen (2007), in the last decade, research has begun to clarify how guasha works. Guasha's therapeutic petechiae represents blood cells that have extravasated in the capillary bed, and measure as a significant increase in surface microperfusion. As this blood is reabsorbed, the breakdown of hemoglobin upregulates HO-1, CO, biliverdin and bilirubin, which are anti-inflammatory and cytoprotective. Studies show the anti-inflammatory effect of guasha has a therapeutic impact in inflammatory conditions, such as active chronic hepatitis, where liver inflammation indicates organ breakdown that over time can lead to premature death. The physiology of HO-1 may also explain guasha's anti-inflammatory effect in other responsive clinical conditions, such as fever, cough, asthma, bronchitis, emphysema, mastitis, gastritis, musculoskeletal and other painful conditions presenting as neck pain, back pain, migraine, postherpetic neuralgia, and others. That guasha has anti-inflammatory and immune stimulation properties are important for providers to understand and to be able to communicate to their patients as well as other health care providers.

According to Nielsen (2001), Guasha is an East Asian healing technique. Guasha is one technique that intentionally raises Sha rash or petechiae. In Vietnam the technique is called Cao Yio, in Indonesia: Kerik, in Laos: Khoud Lam. Sometimes called coining, spooning or scraping, Guasha is defined as instrument-assisted unidirectional press stroking of a lubricated area of the body surface that intentionally creates 'transitory therapeutic petechiae' representing extravasation of blood in the subcutis.

Guasha has been used for centuries in Asia, in Asian immigrant communities and by acupuncturists and practitioners of traditional East Asian medicine worldwide. With the

expansion of traditional East Asian medicine, Guasha has been used over broad geographic areas and by millions of people. It is valuable in the treatment of pain and for functional problems with impaired movement, the prevention and treatment of acute infectious illness, upper respiratory and digestive problems, and many acute or chronic disorders. Research has demonstrated Guasha radically increases surface microperfusion that stimulates immune and anti-inflammatory responses that persist for days after treatment.

Guasha is used whenever a patient has pain whether associated with an acute or chronic disorder. There may be aching, tenderness and/or a knotty feeling in the muscles. Palpation reveals Sha when normal finger pressure on a patient's skin causes blanching that is slow to fade. In addition to resolving musculo skeletal pain, Guasha is used to treat as well as prevent common cold, flu, bronchitis, asthma, as well as any chronic disorder involving pain, congestion of Qi and Blood.

Guasha is an age old bodywork technique that can be used for pretty much anything from your daily aches and pains or headaches to chronic severe ailments. It is used to intentionally surface petechiae to the skin by using a scraping technique in order to help detoxify the body and relieve pain. This unique folk healing method is still commonly practiced in China and other parts of Asia and is often performed in TCM clinics, hospitals, spas as well as in many Asian households. Guasha is popular in Asia because it is a simple technique that is easy to use, and the results are often fast and amazing (theFullSpectrum, 2010).

The Discovering Wellness (2000-2010) defined that Guasha is a traditional ancient Chinese healing technique that dates back over two thousand years. This ancient method of promoting Chi or bioelectric vital life energy, blood circulation and removal of toxic heat, stagnant blood and lymph fluid from the body is an extremely important, almost miraculous method of improving ones health. Chi or Qi (pronounced “chee”) is the constant and vigorous movement of energy or life force that keeps us healthy and alive. This vital application was finally introduced to the west coast around a decade ago and gradually, but fortunately for us has emerged to the Midwest so that we too can reap the rewards from its wonderful healing properties.

According to Starkey (2011), Guasha is an ancient healing technique used by many clinicians of traditional chinese medicine (TCM). In this procedure, a lubricating medium, such as massage oil, is applied to the skin of the area to be treated. A smooth-edged instrument is used by the acupuncturist to apply short or long strokes on the skin, typically in the area of pain or on the back parallel to the spine. This stroking motion creates raised redness (petechiae) or bruising (ecchymosis).

Furthermore, pain, both acute and chronic, is the most common indication for guasha. In the TCM tradition, pain is often times caused by the stagnation of blood in the local area of discomfort. The guiding principle behind guasha is that this technique has the ability to break up stagnation, to promote the smooth flow of blood in the area, thereby relieving pain. While guasha is most commonly used to treat pain, it can also be utilized by TCM clinicians to address conditions such as asthma, bronchitis, colds, flu, fever, heatstroke, fibromyalgia, strains, sprains, and muscle spasms.

Techniques in Gua Sha

Bentley (2013) explained that guasha is applied primarily on the back, neck, shoulders, buttocks and limb, a thick oil is spread over the area to be rubbed. The instrument is held comfortably in the hand and the practitioner usually makes 10 to 30 strokes in a downward direction away from the head. A simple measure to be certain the force used is correct is to ask the person receiving if they are comfortable with the pressure. For best results, guasha is emphasized on both local and distal acupuncture points determined by diagnosis.

Guasha involves repeated pressured strokes over lubricated skin with a smooth edge. Commonly a ceramic Chinese soup spoon was used, or a well worn coin, even honed animal bones, water buffalo horn, or jade. A simple metal cap with a rounded edge is commonly used.

In cases of fatigue from heavy work, a piece of ginger root soaked in rice wine is sometimes used to rub down the spine from head to feet. The smooth edge is placed against the oiled skin surface, pressed down firmly, and then moved down the muscles—hence the term tribo-effleurage (i.e., friction-stroking)—or along the pathway of the acupuncture meridians, along the surface of the skin, with each stroke being about 4–6 inches long.

According to Starkey (2011), researchers have used various techniques, including Doppler images, to show that microcirculation is indeed increased in the treated area, therefore decreasing both local and distal areas of pain. In the mice model, guasha was shown to influence an enzyme (Heme Oxygenase-1) that has a protective antioxidative effect in the cells. An interesting case study showed guasha decreases inflammatory markers of a patient with liver injury due to Hepatitis B, suggesting guasha may even have a protective effect on the liver. As is the case for most healing modalities in Eastern Medicine, modern science has yet again validated the effectiveness of this ancient technique.

The Discovering Wellness (2000-2010) revealed that the method of applying guasha involves the layering of guasha oil on the skin. This oil is enhanced either with healing herbs or essential oils chosen to aid the extraction of toxic waste. The skin is then scraped in the area of discomfort or at times on the entire body using a specific guasha tool depending on whether the treatment is for physical or emotional healing. Guasha treatments are not painful. As the body is scraped it pushes a build-up of fluid ahead of it, and after it passes, it leaves an indention or vacuum behind which draws toxic fluid out to the skins surface from deep within the tissues, the toxic fluid (Sha), as it floods to the surface is seen as small red, deep purple or green pools of blood and very often is hot on the area that the toxic heat is extracted. Red spots are an indication that toxins are being released. Where the area is deep purple the blood is old and extremely stagnant. A dark green discoloration is a sign that stagnant blood and toxic chi are being released from the system. Sometimes a clear fluid will draw to the surface in a form that resembles cellulite or goose bumps. Where the skin starts out as a green glow which turns to red during the treatment, is a sign that pain or stagnant chi is being removed. The exposing of the Sha is literally removing disease from deep within the system.

In Chinese forms of healing, there are three types of bad chi, the first being dead chi. It is stagnation that has been in the body for a very long time without being released. The system suffers from oxygen deprivation. Dead chi is very harmful as it can encourage the growth of cancer cells. Remember, cancer is anaerobic and cannot survive where oxygen is plentiful. The second type of bad chi is stagnant. It is caused by conditions such as lack of exercise, chronic heart, liver, kidney, spleen and lung problems and from an overweight state of health. The stagnant chi is always associated with pain throughout various parts of the body. The third kind of bad chi is toxic chi--where waste products or toxic residue accumulates in the system and when left untreated can result in very serious health problems.

Guasha creates a suction on the skin that pulls stagnant intercellular fluid to the surface, removing toxic debris, and replacing it with fresh oxygenated, nutrient rich fluid, which in turn accelerates regeneration and revitalizes the region where cancer cells may or already have manifested.

Unlike acupuncture, although it is extremely valuable also, Guasha can treat not only the meridian system but the entire system. This is why the Chinese utilize guasha as their foremost treatment in the prevention of disease. Guasha can be used to treat, alleviate and heal chronic degenerative diseases, migraines, chronic neck, shoulder and back pain, bone spurs, strains and

sprains, menstrual disorders, insomnia, heart disease, hypertension, Vertigo, sinusitis, ear and eye disorders, chronic infections, sciatica, osteo arthritis, rheumatoid arthritis, bursitis, neuralgia, asthma, cysts and tumors, carpal tunnel syndrome, stress, digestive disorders, muscle aches, breast pain, varicose veins, skin disorders, blood disorders and liver, spleen, kidney, bladder, pancreatic stress and much more. If you are suffering from any of the these ailments, then it is time to do something beneficial for yourself and experience Guasha and its advantages firsthand by making an appointment with a practitioner that offers this therapy and getting yourself on the road to recovery.

Cautions and Contraindication of Guasha

According to Bentley (2013), take care to avoid pimples, moles and other skin irregularities that may be scratched or broken if an instrument is rubbed over it. Care must also be taken to rub the area with appropriate pressure. The first rule of any therapeutic procedure is to do no harm. Do not apply guasha to people who are too weak to tolerate the treatment, those with bleeding disorders, to people who are taking anti-coagulant medication, during pregnancy and soon after surgery. In addition, they should be cautious applying guasha over varicose veins, skin disease or open wounds, scratches and etc. Those persons suffering from a serious communicable disease should also be taken care of and should be done to patients within one hour before or after eating.

An article also revealed that guasha is contraindicated for some diseases – leukemia, inflamed skin, serious skin problems, hemophilia and other bleeding disorders, open wounds. It is to be avoided in elderly people with weak body or small children.

Misconceptions on Guasha

Xiuqin, Zhang (February 2013) posted an article on People's Daily Online about the common misconceptions about Guasha. According to him, guasha is an easy-to-acquire and highly useful Chinese therapy, and has been widely practiced in China since ancient times. Ancient Chinese often scrape the skin with a dull-edged household instrument such as a silver coin, soup spoon, and tender bamboo board dipped in water, liquor, or sesame oil. As long as red rash-like spots occur, patients' conditions will soon improve. However, there are some common misconceptions about guasha.

The first misconception is that guasha can break blood vessels and cause body injuries.

Many people refuse to receive guasha treatment because they think it will damage their blood vessels and cause venous congestion. "Sha" seeps out of blood vessels without damaging them. When guasha stops, "sha" also stops seeping out. Studies have found that "sha" seeps out through capillaries, the thinnest of all types of blood vessels. Capillaries have only one layer of endothelial cells, and are permeable.

Guasha can force blood containing toxin to seep out of permeable capillaries, and form red spots on the skin. This process, if conducted moderately, can improve local microcirculation instead of causing tissue damage.

The second misconception is that guasha is just a healing technique.

Many people turn to guasha only when they feel pain. In fact, a healthy person will not have red spots on the skin after receiving guasha treatment. Only people with sub-health conditions and patients will have red spots on the skin after receiving guasha treatment. The position, color, and form of "sha" vary according to the area, degree, and nature of microcirculatory disturbances. Guasha can show hypoxia and stasis on the skin in the form of "sha," and help doctors understand patients' conditions intuitively. Therefore, guasha is also a diagnostic technique.

The third misconception is that only patients can receive guasha treatment.

Microcirculatory disturbances are early symptoms of sub-health and illnesses, and guasha can promote blood circulation, activate cells, force toxin out, and improve microcirculation.

The fourth misconception is that guasha is painful.

Guasha does not cause pain as long as it is conducted according to the following principles. First, people who receive guasha treatment should choose a comfortable body position, and relax their muscle. Second, the angle between the guasha tool and the skin should be less than 45 degrees. The narrower the angle is, and the slower the treatment is carried out, the less painful it is. Third, rigid pressing should be avoided, and the skin should be scraped using moderate strength. Fourth, wrists, elbows, and shoulder joints should all be used in guasha treatment. Fifth, the skin should be scraped in various ways. Sixth, the same body area should not be scraped several times. Seventh, the time of guasha treatment should be limited to 30 minutes.

The fifth misconception is that any random tool can be used to conduct guasha treatment.

Professional guasha tools include the scraping board and lubricant. The scraping board should be made of materials that cause no side effects, including buffalo horns, jade, and bian stones. Cream lubricant should be used when the face is scraped, and liquid lubricant for other parts of the body, so the skin can be effectively protected, and the efficacy of guasha treatment can be improved.

The sixth misconception is that any person can receive guasha treatment.

No therapy can treat all illnesses, and guasha is no exception. People with uncertain or acute disease and critically ill patients should go to a doctor or receive guasha treatment under the guidance of a doctor. People who feel fatigued, have an empty stomach, have just sweated or bled heavily, or have liver and kidney failure must not receive guasha treatment. Guasha cannot be used in treating thrombocytopenia, allergic purpura, or leukemia. The following body parts should not receive guasha treatment: unhealed bone fractures, malignant tumors, and the abdomen of a woman on her period or a pregnant woman.

Pain

MedlinePlus, (2013) defined pain as a feeling triggered in the nervous system. Pain may be sharp or dull. It may come and go, or it may be constant. You may feel pain in one area of your body, such as your back, abdomen or chest or you may feel pain all over, such as when your muscles ache from the flu.

Pain can be helpful in diagnosing a problem. Without pain, you might seriously hurt yourself without knowing it, or you might not realize you have a medical problem that needs treatment. Once you take care of the problem, pain usually goes away. However, sometimes pain goes on for weeks, months or even years. This is called chronic pain. Sometimes chronic pain is due to an ongoing cause, such as cancer or arthritis. Sometimes the cause is unknown.

Fortunately, there are many ways to treat pain. Treatment varies depending on the cause of pain. Pain relievers, acupuncture and sometimes surgery are helpful.

The Department of Pain Medicine & Palliative Care, (2011) says that [pain is a perception that signals the individual that tissue damage has occurred or may be occurring.] It is subjective and very complex. The processes in the body that are involved in the perception of pain are called "nociception." Basic and clinical research during the past 50 years has confirmed that there are many mechanisms involved in nociception.

Moreover, pain can be "acute" or "chronic." Acute pain lasts a short time, or is expected to be over soon. The time frame may be as brief as seconds or as long as weeks.

Chronic pain may be defined as pain that lasts beyond the healing of an injury, continues for a period of several months or longer, or occurs frequently for at least months.

To develop the best treatment strategies, health care professionals also classify pain based on its characteristics, its cause, or the mechanisms in the body or the mind that are probably involved in sustaining it. One common classification based on mechanisms distinguishes pain into categories called "nociceptive," "neuropathic," and "psychogenic."

Types of Pain

The Department of Pain Medicine & Palliative Care, (2011) mentioned three types of pain. [Nociceptive pain is believed to be caused by the ongoing activation of pain receptors in either the surface or deep tissues of the body. There are two types: "somatic" pain and " visceral" pain.]

"Somatic" pain is caused by injury to skin, muscles, bone, joint, and connective tissues. Deep somatic pain is usually described as dull or aching, and localized in one area. Somatic pain from injury to the skin or the tissues just below it often is sharper and may have a burning or pricking quality. Somatic pain often involves inflammation of injured tissue. Although inflammation is a normal response of the body to injury, and is essential for healing, inflammation that does not disappear with time can result in a chronically painful disease.

"Visceral" pain refers to pain that originates from ongoing injury to the internal organs or the tissues that support them. When the injured tissue is a hollow structure, like the intestine or the gall bladder, the pain often is poorly localized and cramping. When the injured structure is not a hollow organ, the pain may be pressure-like, deep, and stabbing.

Neuropathic pain is believed to be caused by changes in the nervous system that sustain pain even after an injury heals. In most cases, the injury that starts the pain involves the peripheral nerves or the central nervous system itself. It can be associated with trauma or with many different types of diseases, such as diabetes. There are many neuropathic pain syndromes, such as diabetic neuropathy, trigeminal neuralgia, postherpetic neuralgia ("shingles"), post-stroke pain, and complex regional pain syndromes (also called reflex sympathetic dystrophy or "RSD" and causalgia). Some patients who get neuropathic pain describe it as bizarre, unfamiliar pain, which may be burning or like electricity. The pain may be associated with sensitivity of the skin.

Most patients with chronic pain have some degree of psychological disturbance. Patients may be anxious or depressed, or have trouble coping. Psychological distress may not only be a consequence of the pain, but may also contribute to the pain itself. "Psychogenic" pain is a simple label for all kinds of pain that can be best explained by psychological problems.

Moreover, The Department of Pain Medicine & Palliative Care, (2011) added that this close relationship between pain and psychological distress means that all patients with chronic pain should have an assessment of these psychological factors, and psychological treatments should be considered an important aspect of pain therapy. In some cases, psychological problems appear to be a main cause of the pain. This does not mean that the person is not actually experiencing the pain. Rather, the patient is truly suffering but the main cause somehow relates to the emotions, or to learning, or to some other psychological process. Although doctors sometimes encounter patients who pretend to be in pain (some can be called malingerers), this appears to be a rare occurrence. Most patients with pain that appears to be determined primarily by psychological processes are hurting just like those who have pain associated with a clear injury to the body.

Sometimes, psychogenic pain occurs in the absence of any identifiable disease in the body. More often, there is a physical problem but the psychological cause for the pain is believed to be the major cause for the pain. The various types of psychogenic pain can be diagnosed using a classification developed by psychiatrists (the Diagnostic and Statistical Manual of the American Psychiatric Association).

In an article by Cole, E. (2002), pain is generally classified according to its location, duration, frequency, underlying cause, and intensity. Classification of pain is thus complicated and can be a

source of confusion for many clinicians. As a result, many practitioners now commonly use several different classification systems. Clear distinctions between these systems are not always possible: the more simplistic the classification of pain, the greater the number of omissions and overlaps that can occur. To successfully manage pain, practitioners must be able to work with pain classifications that encompass all considerations (i.e., time course, involved anatomy, intensity, type of patient, and specific pathology) and be able to switch from model to model, depending on a patient's individual circumstances.

Location of Pain

Pain is often classified by body location. Two overlapping schemes relate the pain to the specific anatomy and/or body system thought to be involved. The anatomic pain classification system identifies sites of pain as viewed from a regional perspective (e.g. lower back pain, headache, pelvic pain). In contrast, the body system pain classification method focuses on classical body systems (e.g. musculoskeletal, neurologic, and vascular). Yet, both classification systems address only a single dimension (i.e., where or why does the patient hurt) and thus may ultimately fail to adequately define the underlying neurophysiology of the problem.

Duration of Pain

The duration of the pain process is the most obvious distinction that can be made when classifying pain symptoms. Conventionally, acute pain is limited to pain of less than 30 days' duration, whereas chronic pain persists for more than 6 months. Sub-acute pain comprises the interval from the end of the first month to the beginning of the seventh month of continued pain. Recurrent acute pain describes a pain pattern that persists over an extended period of time but occurs mainly as isolated episodes of pain. Chronic pain is further divided by its underlying etiology into non– cancer-related pain (often called benign or nonmalignant pain) and cancer-related pain (often-called malignant pain).

The primary distinction between acute and chronic pain, regardless of its etiology, is crucial. Acute pain is useful and serves a protective purpose. It warns of danger, limits use of injured or diseased body parts, and signals the departure of pathology when the limiting condition resolves. Without acute pain, it is doubtful that human survival would be possible at all.

Chronic pain, on the other hand, has little protective significance, persists despite normalization after injury or disease, and ultimately interferes with productive activity. becomes chronic. In this regard, the presence of subacute pain, which is quite similar to acute pain in its etiologic and nociceptive mechanisms, may offer physicians the last opportunity for a full restoration of patients to a pain-free existence. Once the pain has been established for more than 6 months, the likelihood of complete pain relief is small (Richard Kroening, MD, PhD, oral communication). Kroening elaborates that most patients, during the first 100 days of pain, appear to respond fully to therapy and often can return to near normality. Beyond this time, however, patients generally do not feel fully restored or comfortable, even when they recover the majority of lost function. By the time pain becomes sub-acute, the rehabilitative approach used for chronic pain is usually more appropriate than are further acute pain management strategies.

Recurrent acute pain involves the acute flare-up of peripheral tissue pathology resulting from an underlying chronic pathologic entity. Typically, headaches, gastrointestinal motility disorders, degenerative disk and joint disease, collagen vascular disease, sickle cell disease, and similar functional processes can elicit this type of pain.

Unlike chronic or sub-acute pain, recurrent acute pain implies discrete acute episodes, which return over time. Determining the dividing line between recurrent acute pain and sub-acute pain is often a judgment decision by the pain practitioner. In general, daily pain for several weeks is sub-acute pain, but several limited pain episodes over many months or years is most likely recurrent acute pain. The recognition of recurrent acute pain enables physicians to apply a more

comprehensive management approach involving patient education, contingency planning, and family than ordinarily would be required by a pain episode.

Shoulder

According to orthoinfo.com (2011), shoulder is made up of three bones: upper arm bone (humerus), shoulder blade (scapula), and collarbone (clavicle).

The head of your upper arm bone fits into a rounded socket in the shoulder blade. This socket is called the glenoid. A combination of muscles and tendons keeps the arm bone centered in the shoulder socket. These tissues are called the rotator cuff. They cover the head of the upper arm bone and attach it to the shoulder blade.

Shoulder Pain

Shoulder pain is a common symptom in primary care. It can be due to an intrinsic shoulder problem but pain can also be referred from other structures, such as the diaphragm, heart or the neck. Common shoulder problems share overlapping clinical features. When assessing shoulder pain, it is important to look for any 'red flags' that mean investigation and diagnosis need a more focused or urgent approach.

Most shoulder problems fall into four major categories: Tendon inflammation (bursitis or tendinitis) or tendon tear, instability, arthritis and fracture (broken bone). Other much less common causes of shoulder pain are tumors, infection, and nerve-related problems.

If the shoulder pain persists for days, a physician will conduct a thorough evaluation in order to determine the cause of shoulder pain and provide client with treatment options.

Medical History, the first step in the evaluation is a thorough medical history. Physician may ask how and when the pain started, whether it has occurred before and how it was treated, and other questions to help determine both the general health and the possible causes of shoulder problem. Because most shoulder conditions are aggravated by specific activities, and relieved by specific activities, a medical history can be a valuable tool in finding the source of pain.

Physical Examination, a comprehensive examination will be required to find the causes of shoulder pain. Physician will look for physical abnormalities, swelling, deformity or muscle weakness, and check for tender areas. He or she will observe your shoulder range of motion and strength.

Different tests may help identify the cause of your pain and any other problems.

X-rays. These pictures will show any injuries to the bones that make up the shoulder joint.

Magnetic resonance imaging (MRI) and ultrasound. These imaging studies create better pictures of soft tissues. It may help the doctor identify injuries to the ligaments and tendons surrounding the shoulder joint.

Computed tomography (CT) scan. This tool combines x-rays with computer technology to produce a very detailed view of the bones in the shoulder area.

Electrical studies. Such as the EMG (electromyogram), to evaluate nerve function.

Arthrogram. During this x-ray study, dye is injected into the shoulder to better show the joint and its surrounding muscles and tendons.

Arthroscopy. In this surgical procedure, the doctor looks inside the joint with a fiber-optic camera. Arthroscopy may show soft tissue injuries that are not apparent from the physical examination, x-rays, and other tests. In addition to helping find the cause of pain, arthroscopy may be used to correct the problem.

Treatment and Care for Pain

According to treatment and management guide (2011), pain is complex, so there are many treatment options like medications, therapies, and mind-body techniques. Learn the benefits and risks of each, including addiction.

These are some pain management guide according to the publisher:

Pain Clinics, a pain clinic is a health care facility that focuses on the diagnosis and management of chronic pain.

Natural Pain Relief, a lifestyle changes, physical therapy, counseling in addition to medication or surgery, these can also bring pain relief.

Chiropractic Care for Pain, this hands-on therapy has been shown to help in treating neck pain and headaches.

Spine Pain and Treatments, for a patient with a painful compression fractures in the spine, both surgical and nonsurgical treatments are explored.

Pain and Alternative Therapy, researches show that acupuncture and other nonmedical treatments can provide pain relief.

Pain Medications: OTC and Prescription, provides a look at the options for pain medication, including possible side effects.

Narcotic Pain Medications, can be used to treat severe pain.

Nerve Block Injections and Pain (Local Anesthesia), when a local anesthetic is injected, it causes a nerve block which in turn blocks the pain.

Trigger Point Injections, injections used to treat serious muscle "knots" called trigger points.

Spinal Cord Stimulation, a low-level electrical signals can block pain signals from reaching the brain.

Spinal Drug Delivery Systems, these systems help people with cancer or chronic pain.

Patient-Controlled Analgesia (PCA) Pump, PCA pumps have many plusses in pain control.

TENS (Electrothermal Therapy), for short-term pain relief.

Bioelectric Therapy for Pain, a safe alternative to pain medication.

Surgery and Pain, at the last resort, there are surgical options to treat pain.

Acupuncture is an age-old healing practice of traditional Chinese medicine in which thin needles are placed at specific points in the body. It is primarily used to relieve pain but also has been used to treat other conditions.

Alternative Treatments for Chronic Pain, in the past decade, strong evidence has accumulated regarding the benefits of mind-body therapies, acupuncture, and some nutritional supplements for treating pain.

Pre-assessment tool

Pain onset prior to 150º of active shoulder elevation in any plane

The patient is in a sitting or standing position, with the researcher in front. Upon the manipulation of the shoulder up to 150 degrees, if pain commences, the researcher must proceed to the following pre-assessment exams to determine the extent of shoulder problems.

Empty Can Test

Empty Can or Supraspinatus test is an examination of the musculosketal condition of the shoulder. A positive test indicates a tear to the supraspinatus tendon or muscle and can also indicate a neuropathy of the suprascapular nerve.

The exam is elicited through a series of procedure that will test positive if the patient experiences pain or weakness upon the performance of the test. Patient actively abducts the arm to 90 degrees with the thumbs up which makes the full can position. The therapist applies a downward force just proximal to the patient's wrist while the patient resists the force applied by elevating the arms to 90 degrees and horizontally adducts 30 degrees to the scapular plane with thumbs down to the empty can position. A pain or weakness experienced by the client indicates a possible supraspinatus pathology.

Hawkins Kennedy Exam

A positive Hawkins and Kennedy test is an indicative of impingement between the geater tuberosity of the humerus against the coraco-humeral ligament, trapping all those structures which intervene.

The exam is performed with the patient in sitting or standing position with their arm at 90 degrees and their elbow flexed to 90 degrees. The examiner then stabilizes proximal to the elbow with their outside hand and with the other hold just proximal to the patient's wrist. They then quickly move the arm into internal rotation. A sharp pain experienced by the client indicates a possible supraspinatus tendon impingement.

TCM diagnosis for pain

According to YinYang House (2001), Traditional Chinese Medicine includes asking the patient variety of questions consisting of the past medical history, origin of the current problem, living and environmental condition, current and past emotional issues including family relationship, work issues and partner relationships. This also includes the eating pattern of the client and the specific question relating to bodily systems.

Identification of TCM pattern is done by using paradigms which includes Ba gong, Zang Fu Organ Diagnosis, channel diagnosis and other paradigms.

Traditionally, TCM diagnosis is composed of different areas of questioning involving the different parts of the body, pain, gynecological condition and pregnancy and childbirth. Only questions relevant to the case of the client should be taken into consideration.

Pain experienced y clients are usually due to deficiency in qi circulation due to stagnation, cold or heat. Excess condition includes invasion of exogenous pathogens, inferior cold or heat, stagnation of QI, stasis of blood, where as deficiency conditions is caused by deficient Qi or blood or deficient Yin with consumption of body fluids.

Pain is one of the main compositions of the TCM diagnosis, according to this; headache is distinguished according to the onset, time, location, nature of pain and condition. A sudden onset of pain indicates exterior attack of wind cold disturbing the yang or qi in the head, on the hand, chronic headache are attributed to interior conditions. Further, daytime headache indicates Qi or Yang deficiency whereas evening headache indicates blood or yin deficiency. In addition, an occipital headache indicates taiyang channels caused by exterior wind-cold or kidney deficiency, whereas frontal headache indicates yang min channels caused by stomach heat or exogenous wind. Temporal or parietal pain indicates shaoyang channels caused by exterior wind cold, vertex headache indicates jueyin channels and is caused by deficient liver blood and whole headache indicates severe extensive wind-cold.

Pain all over the body that has sudden onset and is accompanied by chills and fever is due to an invasion of exterior wind, usually wind cold, pain all over the body with fatigue is usually a deficiency in Qi and blood, post partum women with dull pain usually indicates deficient blood, post partum women with severe, fixed or stabbing pain usually indicates blood stasis. More over muscle pain with hot sensation is usually due to stomach heat, whereas a pain with feeling of heaviness is usually due to dampness obstructing the muscle.

REVIEW OF RELATED STUDIES

A discussion of the different related studies, either local or foreign that help support and contextualize the present study is presented as follows.

A study by Snouffer, et al (2009), this study is investigating the therapeutic benefits of guasha on 40 patients with chronic neck and lower back pain was published in the American Journal of Chinese Medicine. The participants were randomly assigned to either a treatment group, which received only one guasha treatment, or a waiting list control group. Seven days after the treatment, both groups were reviewed. Patients in the treatment group reported pain reduction and improved health status as compared to the control group. But, pain sensitivity improved in the chronic neck pain patients in the treatment group but not in those with lower back pain. The researchers suggest this was due to higher pressure sensitivity in the neck area.

Likewise, a study by Braun, et al (2011), entitled "Effectiveness of Traditional Chinese Guasha Therapy in Patients with Chronic Neck Pain" aimed to determine two outcomes. Primary outcome was change of neck pain severity after 1 week visual analog scale. Secondary outcomes included pain at motion, the neck disability index (NDI) and quality-of-life (Short-Form Health Survey). Results showed that neck pain severity after 1 week improved significantly better in the Guasha group compared with the control group (group difference -29.9 mm, 95% confidence interval: -43.3; -16.6 mm; $P<0.001$). Significant treatment effects were also found for pain at motion, scores on the NDI, and dimensions of quality-of-life. The treatment was safe and well tolerated. It is therefore concluded that guasha has beneficial short-term effects on pain and functional status in patients with chronic neck pain. The value of Guasha in the long-term management of neck pain and related mechanisms remains to be clarified.

Braun's study similarly used Guasha massage to determine its effects on patients suffering from pain. In addition, it aimed to identify if there were changes in the pain severity after the application of the therapy. In different way, it focused on assessing pain on a different body part which is on the neck. At the same time, the research used other ways on identifying the changes in the pain experience that is the NDI and the quality of life health survey.

Another related study comes with the title "Randomized Controlled Pilot Study: Pain Intensity and Pressure Pain Thresholds in Patients with Neck and Low Back Pain Before and After Traditional East Asian "guasha" Therapy" by Lauche, R., et al (2012). This study aimed [to measure the effects of Guasha therapy on the pain ratings and pressure pain thresholds of patients with chronic neck pain (CNP) and chronic low back pain (CLBP). A total of 40 patients with either CNP or CLBP (mean age 49.23 ± 10.96 years) were randomized to either a treatment group (TG) or a waiting list control group (WLC). At baseline assessment (T1), all patients rated their pain on a 10 cm visual analog scale (VAS).] Patients' pressure pain thresholds (PPT) at a site of maximal pain (pain-maximum) and an adjacent (pain-adjacent) site were also established. The treatment group then received a single Guasha treatment. Post-intervention measurements were taken for both groups at T2, seven days after baseline assessment (T1), using the same VAS and PPT measurements in precisely the same locations as at T1. Final analysis was conducted with 21 patients with CNP and 18 patients with CLBP. The study groups were equally distributed with regard to randomization. Patients in both the CNP and the CLBP treatment groups reported pain reduction ($p < 0.05$) and improved health status from their one Guasha treatment, as compared to the waiting list group. Pain sensitivity improved in the TG in CNP, but not in CLBP patients, possibly due to higher pressure sensitivity in the neck area. No adverse events were reported. These results suggest that Guasha may be an effective treatment for patients with chronic neck and low back pain. Further study of Guasha is warranted.

In the same way, Guasha therapy in Lauche's study was used to check its effects on pain. A before and after approach was also utilized to see if changes were felt by the patients. The data

from the patients were also gathered using a visual analog scale and pressure pain thresholds. But unlike this, the researcher of this study focused on leg pain not on neck and low back pain instead on the knees of the patient.

Similarly, LiuZuoYan (2010) conducted a study about guasha entitled "Observation of Timeliness Effect of Guasha Treatment on Exogenous Fever for Abatement of Fever". This research aimed at the purpose of [evaluating timeliness effect, the demic safety and clinical generalization of the Guasha treatment, through clinical observation of therapeutic effect of Guasha on exogenous fever for abatement of it.] And to discuss the mechanism of Guasha treatment, further to study and research pyretolysis by Guasha therapy. The treatment group included 30 patients scraped. 30 minutes after the treatment, there were 11 patients with obvious effect, 13 patients with general effect and 6 patients with no effect among 30 cases in treatment group. The total effectiveness level was 80%. While there were 6 patients with obvious effect, 10 patients with general effect and 14 patients with no effect among 30 cases in control group, the total effectiveness level was 53.33%. Rigid test shows that there is significant difference between these two groups, $P<0.0$ without any untoward effect seen. The integration of temperature abatement for the first 30 minutes and 1 hour after treatment has no significant difference between these two groups ($P>0.05$). The integration of treatment team for continuously 2 to 4 hours after treatment excelled that of control group ($P<0.01$). The instant effect in treatment group excelled that in control group, and the sustained effect in treatment group is steady. It is therefore concluded that the method of Guasha treatment has obviously instant effect, with no side effect, which is easily accepted by patients. And Guasha treatment can make effect steady and sustained in 4 hours. Therefore, it will be of great value for popularized use as one kind of non-drug therapy of TCM and can be supplement therapy for abatement of fever.

Liu Zuo Yan's study is specifically concerned with the effect and safety of Guasha on the abatement of fever different from this study which purpose is for knee osteoarthritis. It is interesting for Liu Zuo Yan to have conducted a research that would be helpful to give a non-pharmacologic intervention for fever. But similarly, he used a treatment and control group to also be able to ensure a precise result. It also gave another purpose which is to determine that Guasha therapy is considerably a safe alternative treatment which is an essential part of proving the health effects of alternative therapies.

Nielsen, et al (2007) in her study entitled "The effect of Guasha Treatment on the Microcirculation of Surface Tissue: A Pilot Study in Healthy Subjects" conducted at the Department of Nephrology, Unit of Circulation Research, University Hospital of Essen, Germany explored the [microcirculatory effects of Gua Sha on the skin and subcutis in humans to elucidate physiological mechanisms responsible for the clinically observed pain-relieving effect of this treatment. Guasha caused a fourfold increase in microcirculation PUs at the treated area for the first 7.5 minutes following treatment and a significant increase in surface microcirculation during the entire 25 minutes of the study period following treatment ($P < .001$).] Females showed significantly higher rates of response than males ($P = .003$). Each subject experienced immediate decrease in myalgia in both the site treated, in the related distal control site, and in some cases, other distal sites. Pain relief persisted to some extent up to the follow-up visit. There were no adverse reactions. It is concluded therefore that Gua Sha increases microcirculation local to a treated area, and that increase in circulation may play a role in local and distal decrease in myalgia. Decrease in myalgia at sites distal to a treated area is not due to distal increase in microcirculation. There is an unidentified pain-relieving biomechanism associated with Guasha.

This study by Nielsen delved deeper to the effects of Guasha in the body especially to reduce pain. She studied deeper on the physiological response of the body once Guasha was applied. This is different from the researcher's current study since it is just focused on the subjective response

of the patient after the therapy without the intention to still explore the microcirculatory effects of it on the skin.

By way of comparison to other perfusion studies, Mars et al. (2005) demonstrated increased skin blood flow from compressed air massage that immediately fell when treatment stopped. Kuo et al. (2004) used laser Doppler scanning to demonstrate a small but significant increase in skin blood flow from de qi acupuncture, both in the hand point needled (LI4, Hegu) with short-lived spikes in skin blood flow up-meridian at elbow point LI11 (Quchi). Sandberg et al. (2003) studied superficial muscle blood flow changes from acupuncture needling, finding that acupuncture with a de qi response increased superficial and deep muscle blood flow by 75% for the first 5 minutes after needling. In contrast, Guasha increased superficial blood flow by 400% for the first 7.5 minutes, with significant increases maintained for the full 25-minute period studied. Guasha appears to sustain an increase in microcirculation greater and longer than massage or acupuncture.

Another study published in the journal Pain Medicine by German researchers (2009) randomly assigned 48 patients with chronic neck pain to either one-guasha treatment or local thermal heat pad treatment and followed up seven days later.

The researchers concluded that guasha has beneficial short-term effects on pain and functional status in chronic neck pain patients, but its value in the long-term remains to be seen.

Another in depth study about the Guasha procedure is discussed by Kwong, K.K. (August 28, 2009) entitled "Bioluminescence Imaging of Heme Oxygenase-1 Upregulation in the Guasha Procedure". The protocol for bioluminescent optical imaging of HO-1-luciferase transgenic mice reported in this manuscript provides a rapid in vivo assay of the upregulation of the heme oxygenase-1 (HO-1) gene expression in response to the Guasha procedure. HO-1 has long been known to provide cytoprotection against oxidative stress. The upregulation of HO-1, assessed by the bioluminescence output, is thought to represent an antioxidative response to circulating hemoglobin products released by Guasha. Guasha was administered by repeated strokes of a smooth spoon edge over lubricated skin on the back or other targeted body part of the transgenic mouse until petechiae (splinter hemorrhages) or ecchymosis (bruises) indicative of extravasation of blood from subcutaneous capillaries was observed. After Guasha, bioluminescence imaging sessions were carried out daily for several days to follow the dynamics of HO-1 expression in multiple internal organs.

Schwickert et al. (2007) have documented a case study of a 72 year woman who suffered from chronic headaches responded to Guasha treatment at the Kliniken-Essen in Germany. The patient who suffered from chronic headaches, highly profited from Guasha during her 14-day inpatient multimodal treatment. This case provides first evidence that Guasha is effective in the treatment of headaches. Further research and clinical trials are required to corroborate that evidence.

It is such a good start for Guasha to be tried to a single person and yet have yielded positive result. Being effective on headache, this study by Schwickert can be followed by other researchers who would want to study on the use of Guasha on other parts of the body. It is still favorable if the effects of Guasha be studied on large group as a basis for its usefulness on our health.

A study on Guasha for neck pain is forthcoming from the same group who has also published an article discussing the neurological basis of 'reflex' therapies such as Guasha, massage, cupping and acupuncture (Musial, Michalsen and Dobos 2008). Finally, regarding Western medical literature two studies looked at a technique similar to and likely derived from Guasha where petechiae are intentionally raised in what is called 'instrument assisted soft tissue mobilization'. Application to rat tendons (Davidson et al. 1997; Gehlson, Ganion and Helfst1999) resulted in fibroblast activity and the authors propose fibroblast proliferation as a possible biomechanism of healing. Dr.Helen Langevin's team at the University of Vermonth as established fibroblast activity

resulting directly and immediately from acupuncture needling (Langevin et al.2001; Langevin et al.2002; Langevin and Yandow 2002; Langevin et al. 2005) with implications for a mechanotransduction-based biomechanism (Langevin etal.2006).

This study on the other hand did not use persons as experimental group but rats to give proof on the effects of Guasha massage in the body. This is more on a scientific study that investigates what the biomechanism of the petechiae resulted by the application of Guasha on the skin does to cause relief on the patients' condition.

A literature search of the Chinese medicine journal database from 1984-2004 found 120 outcome studies on Guasha published between 1998 and 2003 (Nielsen 2007) confirming the use of Guasha as a therapy in clinics and hospitals in China. Twenty-five percent of the articles dealt with some kind of neck problem or coinciding neck and shoulder problem where the N of subjects ranged from 28to 410 per study. Twelve studies were on frozen shoulder; seven for lumbar strain or pain and others for pain or immobility associated with sciatica, ankylosing spondylitis, arthralgia and osteoarthritis. Guasha for pain not related to musculoskeletal problems is studied in the treatment of trigeminal neuralgia, post herpetic neuralgia, epigastric pain, headache, migraine, sinus and supraorbital pain, as well as dysmenorrhea and renal colic (Nielsen, 2007).

In addition to chronic problems Guasha was studied for acute infectious illness with fever, respiratory infections, conjunctivitis, pharyngitis, sinusitis, bronchitis, pneumonia, and influenza are listed. Chronic recurring infections are treated as well such as recurrent mastitis, infantile diarrhea, and hepatitis B. Chronic disorders such as ulcerative colitis and hemorrhoids are listed, as well as use of Guasha in treatment for acne, styes, insomnia, dizziness, neurasthenia, ascites secondary to liver cirrhosis, adhesive small bowel obstruction, and thermal dysregulation in the form of low body temperature and sensitivity to cold, or prostration due to heat presenting as heat stroke and sunstroke (Nielsen 2007, p22-23). Finally it is important to note that some of these studies looked at the effect of Guasha combined with other therapies such as Tuina, bloodletting, acupuncture or cupping; a combination of therapies is often a reality in a functional clinical setting.

Several studies mentioned in this article are similar to the current study as it all carried on the pursuit to give evidence-based alternative therapy which is the Guasha. On the mentioned researches above, Guasha therapeutic effects were tested on various conditions including the ones which were even so complicated to be treated with an alternative or complementary therapy. Uniquely, the current study attempts to determine the effects of Guasha not on the usual conditions but on knee osteoarthritis.

Moreover, Myeong Soo Lee, et al (2010) had a study entitled "Using Guasha to Treat Musculoskeletal Pain: A Systematic Review of Controlled Clinical Trials". Five randomized controlled trials (RCTs) and two controlled clinical trials (CCTs) were included in the present study. [Two RCTs compared Guasha with acupuncture in terms of effectiveness, while the other trials compared Guasha with no treatment (1 trial), acupuncture (4 trials), herbal injection (1 trial) and massage or electric current therapy (1 trial). While two RCTs suggested favorable effects of Guasha on pain reduction and response rate, the quality of these RCTs was poor.] One CCT reported beneficial effects of Guasha on musculoskeletal pain but had low methodological quality. Current evidence is insufficient to show that Guasha is effective in pain management. Further RCTs are warranted and methodological quality should be improved.

A study posted by Loworn (n.d.) with the title "Guasha Treatment of Infantile Fever Due to Exopathy Antipyretic Effect of Clinical Observation" involved [observation of infantile fever due to exopathy treated by external therapy of guasha instant effects, discussion on two aspects of systems theory and clinical study on the mechanism of guasha treatment of fever.] Clinical choice

to meet the inclusion criteria of children's fever 64 cases, take itself as a control group, use of guasha therapy, observation of guasha on body temperature in children with immediate effect. After clinical research in 64 children, treatment after 10 minutes, 20 minutes, 30 minutes display effect is remarkable guasha treatment of infantile fever due to exopathy instant results. Supervisor, professor Feng Xiao Chun engaged in pediatric clinical work for many years accumulated a great deal of experience, combining the character of medication in children with usual difficulty, an injection of pain, guasha in body surface scraping specific acupoints and meridians to erase to dredge the channels and collaterals the evil foreign, achieve the purpose of prevention and cure. This method is simple, convenient, cheap and efficient. External therapy of traditional Chinese medicine is receiving increasing attention on treatment of fever in children also tend to wide, has the ideal prospect.

Loworn's study is quite similar to Liu Zuo Yan's (2010) study also included above. Both observed on the efficacy of Guasha massage therapy on fever. In relation to the current study, Loworn's study became different because of the condition of the patients being studied. The researcher tends to study on osteoarthritis specifically on knee pain.

Chiu, J.Y., et al. (2010) studied on Guasha massage therapy as well. A randomized controlled trial was conducted on 54 postpartum women at a Level III medical teaching hospital. Participant inclusion criteria included postpartum breastfeeding women (a) who had an uncomplicated delivery and (b) who were experiencing breast engorgement problems. The Guasha protocol selected appropriate acupoint positions, which included ST16, ST18, SP17, and CV17. Each position was lightly scraped seven times in two cycles. For the control group, they used hot packs and massage for 20 min in accordance with recommendations given in an obstetrical technique textbook. Results showed no statistical differences between the two groups at baseline. Body temperature, breast temperature, breast engorgement, pain levels, and discomforting levels were statistically different between the two groups at 5 and 30 min after intervention ($p < .001$). The results of generalized estimating equation analysis indicated that, with the exception of body temperature, all variables remained more significant ($p < .0001$) to improving engorgement symptoms in the experimental group than those in the control group, after taking related variables into account. The findings provided empirical evidence supporting that Gua-Sha therapy may be used as an effective technique in the management of breast engorgement. By using Guasha therapy, nurses can handle breast engorgement problems more effectively in primary care and hence help patients both physically and psychologically.

Chiu et. al. (2010) and the researcher both studied on the efficacy of Guasha but on different condition as well and different sample groups. Chiu preferred to study on groups of breastfeeding postpartum woman while the researcher chose the elderly suffering from polyneuritis. It is noteworthy that apart from the several conditions being studied regarding the use of Guasha, different people in all ages were also explored as sample groups, underscoring the importance of its holistic usage.

Snouffer, E. (2012) mentioned in her article studies on the diverse effects of Guasha. According to her, in 2009, researchers at Harvard found that Guasha has potential for anti-inflammatory and immunological properties and, in 2011, another Harvard study showed that guasha reduced liver inflammation in chronic active hepatitis B.

It is another interesting study to have proven that Guasha massage as a non-pharmacologic treatment helped to reduce liver inflammation. Similarly, knee osteoarthritis which is the focus of the researcher's study is an inflammatory condition caused by the rubbing of the bones of the joints. The underlying mechanism in which the liver inflammation was reduced by Guasha probably goes the same way on knee osteoarthritis. This gives a view on how Guasha will also take effect once the researcher applied this therapy on others.

In September 2012, a study investigating the therapeutic benefits of guasha on 40 patients with chronic neck and lower back pain was published in the American Journal of Chinese Medicine. The participants were randomly assigned to either a treatment group, which received only one guasha treatment, or a waiting list control group. Seven days after the treatment, both groups were reviewed. Patients in the treatment group reported pain reduction and improved health status as compared to the control group. But, pain sensitivity improved in the chronic neck pain patients in the treatment group but not in those with lower back pain. The researchers suggest this was due to higher pressure sensitivity in the neck area.

In addition to her article, Snouffer (2012) revealed that researchers from the Korea Institute of Oriental Medicine did a systematic review of controlled clinical trials of guasha and published their findings in 2010 in the journal BioMed Central. They searched 11 databases and found seven trials, three of which the researchers say showed favorable effects on pain reduction but were of poor study quality. "Current evidence is insufficient to show that guasha is effective in pain management," they conclude.

The studies also wanted to establish evidences on Guasha's efficacy on pain. It is interesting to know why there are still studies that show insufficient results different from the others which succeeds on giving proofs on Guasha massage therapy's efficacy. Consequently, it provides support that Guasha still needs to be studied.

Another study published last year in the journal Pain Medicine by German researchers randomly assigned 48 patients with chronic neck pain to either one guasha treatment or local thermal heat pad treatment and followed up seven days later. The researchers concluded that guasha has beneficial short-term effects on pain and functional status in chronic neck pain patients, but its value in the long-term remains to be seen.

A case study in an article posted on the Happy Clover Acupuncture and Herbal Medicine involves a patient who had cough for a while on and off, now combining with symptoms of running nose, phlegm in the chest but hard to expel, post nasal dripping, difficulty breathing and irritability. A cupping treatment was done first on Lung (UB12, 13), Spleen (UB20) then on Kidney (UB23). The color of the skin after the cupping was dull red. It was decided to do Guasha. After 5 minutes of scraping, the Sha was gradually showing up. At this time, when asked how the patient feels, she said, "I can feel my chest open it up".

The Guasha was continued along the spine especially on three areas (Lung, Spleen, Kidney). At the same time needle was inserted on SJ5, LU7 and LI4 (Patient was face down). After Guasha, remove SJ5, LI4 (keep LU7 needles stay), turn patient face up.

They inserted needle to Ren 17, Ren 12, Ren 6 to restore her spleen qi and stop coughing. They also added LI 20 on the face near the nose to aid the congestion. After 15 minutes, when asked about how she felt then, she said "I cannot believe how I can breathe now, and feeling of phlegm in my chest is gone. I can breathe much deeper now".

After the case study, it is concluded that by working with digestion (Spleen and abdominal) point to treat the roots of the problem, working with lung points to expel the pathogens and strength to protect wei qi, strengthening the kidney will scrape the qi down stopping coughing and protect chronic coughing injure the kidney.

Another case study on the website First Health of Andover reported suffering from nagging pain in the heel (planter fasciitis) for approximately 2 months. Pain occurred subsequent to daily 4 mile walks wearing flip flops. Pain was described as moderate intensity 4/10 and was worse in the morning upon waking. Pain was enough to cause the patient to limp in attempt to relieve pressure on the foot. Patient was treated 3 times using acupuncture alone with good results. Discomfort was reduced to only when walking. On the 4th visit, Guasha was combined with

electro stimulation and regular acupuncture. Guasha was performed on the heel and along the Achilles tendon. Electro stimulation was used directly on the sore spots on the heel. The patient returned for one additional follow up and reported that condition was 85% - 90% better with no heel pain when walking.

As demonstrated in the above case, in addition to the more common issues of back and shoulder pain, Guasha can be useful for conditions as diverse as planter fasciitis. Guasha can also be used as an adjunctive therapy for internal conditions like chronic asthma, especially when the muscles of the neck and upper back have been recruited to help with breathing.

More than the several mentioned therapeutic uses of Gua Sha on different illnesses, it is also known to be useful on aesthetic purposes.

Studies cited in Skin and Body Care (2010-2012) also show that Guasha therapy is the Traditional Chinese Medicine (TCM) art of facial and body scraping for beauty, health, and wellness; similar to acupuncture treatment, but without the use of intrusive needles. According to them, the Guasha technique helps to restore and re-balance the vital energy system in the body, which eliminates pathogenic factors directly. The technique is simple, effective and has no side effects; it has been practiced for more than 25 centuries by the Chinese people and is a precious heritage of traditional Chinese medical science and massage therapy. Like Acupuncture and Feng Shui, Guasha Therapy is recognized for its positive energy, and its ability to repair aesthetic problems. The Guasha technique is based on holographic meridian scraping theory. In TCM, there are 14 meridian pathways with corresponding acupuncture points distributed throughout the body and connected to each organ system. The face has direct meridian connections to nine of the major meridians of the body.

Moreover, facial Guasha's effects are enumerated as follows: reduces wrinkles, lines, folds, pigmentation, age spots, premature aging skin, acne, rosacea; promotes collagen production; increases skin firmness; accelerates skin rejuvenation; activates Qi and promotes blood circulation; resolves blood stasis; helps eliminate toxins and increases the metabolism; strengthens immunological functions.

The Modern Cosmetology Centre (2007-2013), similarly cited a study revealing the effectiveness and mechanism of action of facial Guasha. It says that there are 8 meridians of "Jingli" in facial zone. The massage Guasha on these zones helps to stimulate biological active points, thus regulate functions of corresponded viscus, circulation of blood and energy Qi. Facial massage Guasha allows the direct impact on the nerve endings of the epidermis, hastens their reaction, enhances their function of nerve signals transmission. At the same time an improvement of microcirculation of the skin that can make a sufficient amount of oxygen and various nutrients in it. Thus enhances the regenerative capacity of cells and elastin fibroblasts. In addition from interstitial spaces are derived metabolites due to lymphatic drainage, which runs to the principles of movement of lymph. This helps to improve the skin, provides antioxidant effects, does skin bleaching, smoothing the wrinkles, elimination of age spots and acne scars and achieves a good cosmetic effect.

The related studies found showed real interest in the use of Gua Sha massage on different aspects in health. These had been a great help to the researcher as each gives a picture on how Guasha works on different parts and conditions of the body. However, all in all, the results of these studies remain to be clarified giving the researcher the motivation to continue on the pursuit of finding evidences and proofs on the therapeutic effects and safety of Guasha massage therapy as a complementary and alternative therapy.

Limitations in the conventional medical management of osteoarthritis indicate a real need for safe and effective treatment of osteoarthritis patients. People who aren't helped by medications

for osteoarthritis pain sometimes turn to complementary and alternative medicine practices for relief.

People with arthritis and musculoskeletal conditions whose symptoms are often long-lasting – may be particularly attracted to try such medicines. Evidence suggests that users of complementary medicine want to participate in treatment decisions, are likely to have active coping styles, value non-toxic, holistic approaches to health, tend to believe that psychological and lifestyle factors are important in the development of illness believe they can control their health.

SYNTHESIS

In a study conducted by Dr. Ming Wu (2012), similarities are found in comparison to the present study. Dr. Ming Wu said that Guasha therapy is mainly applied in the case of common colds, fever, heat-stroke, pain in the shoulder, back, legs etc. The researcher found similarities on studying the efficacy of Guasha massage therapy as a treatment to pain. Guasha massage therapy is regarded as a form of acupuncture that does not penetrate the skin, a massage therapy not using the hands directly.

In a different way, in a study conducted by Myeong Soo Lee, trials were made using acupuncture, herbal injection and electric current therapy to serve as comparison on Guasha's effects on pain. The present study, on the other hand performs guasha therapy using a Philippine carabao horn as a scraper tool to compare the efficacy of Guasha.

The uniqueness of the study is the possible output of the study which is the Guasha guidelines. This guideline is to help the people increase their knowledge on the alternative medicines available here in the Philippines. Another uniqueness is that the study will only be focusing on the shoulder pain, which is a great hindrance to perform activities of daily living.

CHAPTER III

METHODOLOGY

This chapter presents the research design used in the investigation, the setting or the locale of the study, the respondents, and data gathering procedures, instrument and statistical tools.

Research design

The researcher used a prospective single blinded, true experimental study. The true experimental study was adopted by the researcher to avoid bias in determining the efficacy of the guasha therapy compared to the spoon therapy.

According to Campbell, D. & Stanley, J. (1963), a true experiment will randomly assign individuals to separate conditions or levels of an independent variable or combination of variables to see what effect that has on the dependent variable. The key is in the random assignment. In a true experiment, anyone could be placed in any of the conditions or levels. Due to the random assignment, one can draw stronger conclusions about the causal nature of the relationship between your independent and dependent variable.

The researcher utilized a prospective, single blinded study focusing only on the students and athletes of UMak experiencing shoulder pain. Furthermore, Single blinded study describes experiments where information that could introduce bias or otherwise skew the result is withheld from the participants, but the researcher will be in full possession of the facts.

The identified method and design was utilized for the study as the researcher would like to assess the efficacy of the scraper tool made from the Philippine carabao horn.

POPULATION FRAME

Purposive sampling technique was utilized for this study. Purposive sampling according to Patton (1990) is a sampling technique where subjects are selected because of some characteristics. The researchers have established the following criteria for selecting the respondents: (1) pain onset prior to 150o of active shoulder elevation in any plane, (2) positive empty can test indicating possible supraspinatus involvement, (3) positive Hawkins-Kennedy test indication possible external impingement, (4) positive TCM diagnosis on shoulder pain, (5) subjective complaint of difficulty performing activities of daily living and (6) age between 18-50 years old.

The athletes of the University of Makati were the target respondents of the study that has a total population of 400 students joining different sports, in which 40 athletes who complain of shoulder pain becomes the respondents of the study.

Research locale

The venue of the proposed study is the University Of Makati. The venue is located at J.P. Rizal Avenue, West Rembo, Makati City.

The University consists of five buildings. The Academic Building I, II, and III which houses two or more colleges or facilities that caters to different disciplines. In the center the Administration Building which houses miscellaneous offices such as the Library, Accounting Office, and the Registrar. It also houses administrative offices such as the Office of the University President and the office of the University Vice President. And the recently opened and currently operating, the Health and Physical Science Building that houses an enhanced Chemical Laboratories, a University Gym, Basketball and Volleyball courts, and more classrooms and Audio-Visual Rooms.

The track and oval field serves as the main attraction of the university where different sport fest were held every year.

A.

INSTRUMENTATION

A questionnaire was prepared by the researcher to gather all the information needed for the study. The survey questionnaire is standardized based on the study made by Roach KE, Budiman-Mak E., Songsiridej N., Leitratanakul Y. which focuses on the development of shoulder pain and disability index and the Wong Baker's pain scale to measure the respondents' level of pain. With the help of this tool, the severity of the pain and the functional activities of the respondents will be assessed. The tool is made up of eight parts namely: Part I: Personal data of the respondents; Part II: Pre-assessment tool; which will be used only by the researcher and two trained registered nurses to screen students who will meet the four set criteria's; Part III: Shoulder Pain and Disability Index (SPADI); Part IV: Range of Motion and Part V: Visual Analogue Scale (VAS) which will correspond to the level of pain the athlete and the students feels before performing the procedure. Part VI: Shoulder Pain and Disability Index (SPADI); Part VII: Range of Motion and Part VIII: Visual Analogue Scale (VAS) will be measuring the changes in the level of pain respondents experiences after performing the therapies.

Part II is an assessment tool that ensured that the respondents will meet the criteria set by the researchers namely: (1) pain onset prior to 150o of active shoulder elevation in any plane, (2) positive empty can test indicating possible supraspinatus involvement, (3) positive Hawkins-Kennedy test indication possible external impingement, (4) positive in TCM diagnosis for shoulder pain, (5) subjective complaint of difficulty performing activities of daily living and (6) ages between 18 to 50 years old. The respondents must present with a positive feedback for all the criteria's to be included in the study. SPADI, ROM and VAS will be assessing the level of pain the respondents' experiences before and after the therapy.

The tool was subjected for content validity. An expert in the alternative and complementary medicine were consulted by the researcher. The validator has broad knowledge about alternative medicine and complementary health. Also, the survey was evaluated and tested using cronbach alpha to measure its statistical stability.

DATA GATHERING PROCEDURE

After having the topic approved by the professor who is an expert in complementary and alternative medicine, the researcher undergone a thorough survey of the different related literatures from different sources such as books, internet and previous studies. This helped the researcher gain more knowledge and insights regarding the current study.

To collect the data needed, the researcher adapted the research tool regarding shoulder pain and disability index, range of motion and visual analogue scale. These tools aided the researcher in measuring the level of pain the client experiences and can be used in developing guidelines on how to use guasha made up of Philippine carabao horn. The researcher gathered data upon the approval of the letter to be submitted to the university president asking for permission to pursue the study.

All athletes who presented shoulder pain shall undergo screening to be performed by the trained registered nurses using the pre-assessment tool. Upon screening, the inclusion criteria set by the researcher are 1) pain onset prior to 150o of active shoulder elevation in any plane, (2) positive empty can test indicating possible supraspinatus involvement, (3) positive Hawkins-Kennedy test indication possible external impingement, (4) positive TCM diagnosis on shoulder pain, (5) subjective complaint of difficulty performing activities of daily living and (6) age between 18-50 years old. Exclusion criteria includes girdle fracture, glenohumeral dislocation/ subluxation, acromioclavicular sprain, concomitant cervical spine symptom, a history of shoulder surgery within the previous 12 weeks, or shoulder pain for longer than 6 months. Exclusion

criteria were chosen in an attempt to increase the homogeneity of the subjects and to eliminate subjects with pathology that would be less likely to respond to the guasha and spoon therapy.

After screening, the athletes who met the criteria were randomly divided between a controlled and experimental group. The controlled group utilized the spoon therapy whereas the experimental group received the guasha therapy.

Utilizing the guasha therapy, scraping the shoulder with the Philippine carabao horn helped determine the exact location of the pain. While holding the bottom of the plate to lean against the center of the palm, thumb and four other fingers placed on the two sides of the plate separately with natural curve, the palm of the hands was pressed downward with proper force as scraping to elicit sha or the redness found on the skin. The cause and source of the sha must be elicited first before proceeding with the therapy itself. Sha that appears bright red in color with marvelous glow is an indication of heat syndrome and acute inflammation; sha that appears purple-red, blue-purple or deep blue in color suggest cold syndrome, sha distributing densely without gloss and dark in color indicates anti-pathogenic Qi, deficiency and obsolete diseases whereas sha appearing less and slow indicates deficiency of Qi and blood, cold syndrome, disease of the bone ligaments and tendons in deeper locations of the body. Apart from the appearance of sha, the pain that was induced by scraping in guasha also reflects different causes of diseases with its nature. Soreness suggest deficiency of Qi and blood, distending pain Qi depression and Qi stasis of disorder of Qi circulation. Positive reaction without pain suggest obsolete diseases without manifestations lasted long time of disorder of Qi and blood circulation in meridians while positive reaction with pain, local inflammation or symptom that disorder of Qi and blood circulation lasted long time.

Athletes and students presenting with shoulder pain can be treated with three different methods. The first method is the application of rigorous scraping over the oblique zone posterior to the vertex. This will help in searching the sensitive points of pain. After determining the point of pain, guasha oils will be applied on the jianjing (GB21) and the upper part of the shoulder, board-scraping method by using the Philippine carabao horn touching the skin at the angle of 30-60 degrees (usually 45 degrees) will be utilized by scraping downward from the upper to the lower, medial to the lateral part, of the shoulder giving more emphasis and focus on the areas of pain and nodules. Second method includes applying rigorous scraping focusing on the middle 1/3 section of the anterior and posterior oblique zone of vertex-temple without guasha oils while searching for tender spots and giving emphasis on this area. Method 3 will also help lessen the pain through the downward board scraping method after spreading the guasha oils in Waiguan (TE5), superior to the wrist and Zhongzou (TE 3) at the back of the hands. Board scraping method will be utilized to scrape the Waiguan (TE5) downward, while whereas Zhongzou (TE 3) will be pressed and rub vertically. During the therapy, scraping should be performed slowly and with kneading manipulation which may relieve pain effectively.

After gathering the data, the researcher collated, tallied, tabulated, analyzed and interpreted the data using the most appropriate statistical treatment.

STATISTICAL TREATMENT

The statistical treatment was the tool that the researcher used in order to properly analyze the gathered data. It is critical that the researcher use the correct formulas in order for them to come up with an accurate analysis which is use to draw conclusions and prove hypothesis. The amount of samples and types of data gathering procedure highly affects the type of statistical treatment that will be used by the researcher. Data obtained from the instrument was statistically treated using the statistical procedures as follows:

For problem number 1 and 2, which will discuss the level of pain of the experimental and controlled groups before and after the therapy, Mean will be used. This average value can then be used to provide a simple description of the entire sample and to express on a standardized scale how different the actual data is from the expected average value.

Mean is the average of the scores. The formula for the mean is:

$$\frac{X1 + X2 + X3 + \ldots}{Nx}$$

Where:

x = raw scores

N = number of scores

The response of the respondents for the level of pain according to SPADI and ROM will be interpreted using the following scale, range and their equivalent interpretation as follows:

Scale	Range of Values	Response	Interpretation
5	4.20 – 5.00	Very Painful	Intense Pain
4	3.40 – 4.19	Painful	Severe Pain
3	2.60 – 3.39	Moderately Painful	Moderate Pain
2	1.80 – 2.59	Less Painful	Mild Pain
1	1.00 – 1.79	No Pain	No Pain

The response of the respondents for the level of difficulty according to SPADI will be interpreted using the following scale, range and their equivalent interpretation as follows:

Scale	Range of Values	Response	Interpretation
5	4.20 – 5.00	Very Difficult	Intensely Difficult
4	3.40 – 4.19	Difficult	Very Difficult
3	2.60 – 3.39	Moderately Difficult	Difficult
2	1.80 – 2.59	Less Difficult	Slightly Difficult
1	1.00 – 1.79	Not Difficult	Not Difficult

While the response of the respondents for VAS will be interpreted using the following scale, range, and their equivalent interpretation as follows:

Scale	Range of Values	Response	Interpretation
5	4.16 – 5.00	Extremely Painful	Hurts Worst
4	3.33 – 4.15	Very Painful	Hurts Whole Lot
3	2.50 – 3.32	Painful	Hurts Even More
2	1.67 – 2.49	Moderately Painful	Hurts Little More
1	0.83 – 1.66	Less Painful	Hurts Little Bit
0	0.00 – 0.82	No Pain	No Hurt

For problem number 3 and 4, which engaged on the significant differences in the level of pain of the respondents before and after the guasha and spoon therapy, One-way Analysis of Variance (ANOVA) test were utilized. ANOVA was used to compare the means of more than two categories of a variable. ANOVA is a statistical test which analyzes variance. It is used in making comparison of two or more means which will help to draw various results and predictions about two or more sets of data. One-way anova has the following test statistics:

$$F = \frac{MST}{MSE}$$

Where:

F = Anova Coefficient

MST = Mean sum of squares due to treatment

MSE = Mean sum of squares due to error.

Formula for MST is:

$$MST = \frac{SST}{p-1}$$
$$SST = \sum n(x - \bar{x})^2$$

Where:

SST = Sum of squares due to treatment

p = Total number of populations

n = Total number of samples in a population.

Formula for MSE is:

$$MSE = \frac{SSE}{N - p}$$
$$SSE = \sum (n - 1)S^2$$

Where:

SSE = Sum of squares due to error

S = Standard deviation of the samples

N = Total number of observations.

CHAPTER IV

RESULTS AND DISCUSSION

This chapter presents the results of data gathering, the answers to the statement of specific questions of the study. The data were analyzed and interpreted using the most appropriate statistical tests.

Problem 1: What is the level of pain of the experimental group before and after guasha therapy in terms of:

1. Shoulder pain and disability index (SPADI)

Table 1.1: Result of Weighted Mean on the Level of Pain of the Respondents According to SPADI Before and After Guasha Therapy

Level of pain upon performing…	Before		After	
	WM	I	WM	I
1. At its worst?	4.00	SP	1.75	NP
2. When lying on the involved side?	3.45	SP	1.25	NP
3. Reaching for something on a high shelf?	3.45	SP	1.10	NP
4. Touching the back of your neck?	3.50	SP	1.25	NP
5. Pushing with the involved arm?	3.45	SP	1.15	NP
General Weighted Mean	**3.57**	**SP**	**1.3**	**NP**

Legend:

WM = Weighted Mean
R = Rank
I = Interpretation
SP = Severe Pain
NP = No Pain

Table 1.1 presents the level of pain the respondents experienced before and after performing the following activities; the pain at its worst, when lying on the involved side, when reaching for something on a high shelf, when touching the back of the neck and when pushing with the involved arm. Generally, before the administration of the guasha therapy there is a severe pain experienced by the respondents upon the performance of the said activities as reflected by the general weighted mean of 3.75. And after guasha therapy, it generally lowered down to 1.3 which indicates no pain.

Looking at the specific items before administration of guasha therapy, pain at its worst, respondents experienced the weighted mean of 4.00 indicated as severe pain. The activity of touching the back of the neck ranks 2nd with 3.50 weighted mean. The other activities such as when lying on the involved side; reaching for something on a high shelf and pushing with the

involved arm gathered a weighted mean of 3.45. Further, the result gathered suggests that the pain worsens upon the application of pressure or force on the affected shoulder. Nevertheless, the following activities elicited severe pain.

After administration of guasha therapy, specific items show that pain at its worst has a 1.75 weighted mean, when lying on the affected side with 1.25, reaching for something on the shelf with 1.10, touching the back of the neck with 1.25 and pushing with the involved arm with 1.15. In general, the guasha therapy became effective as indicated by the general weighted mean of 1.30 which is interpreted as no pain.

From the general weighted mean of 3.75 interpreted as severe pain before the administration of guasha therapy, it can be concluded that the guasha therapy has taken its effect as shown in the general weighted mean of 1.3 after the therapy.

According to NHS Choices (2012), the type of treatment offered for shoulder pain will depend on the underlying cause and symptoms. Options such as heat or ice packs and painkillers may help reduce pain and treat minor injuries at home. Further, if the pain persists, main treatments for shoulder pain must be recommended.

Table 1.2: Result of Weighted Mean on the Difficulty of the Respondents According to SPADI Before and After Guasha Therapy

Level of difficulty upon performing…	**Before**		**After**	
	WM	**I**	**WM**	**I**
1. Washing your hair?	3.40	VD	1.15	ND
2. Washing your back?	3.40	VD	1.20	ND
3. Putting on an undershirt or jumper?	3.25	D	1.10	ND
4. Putting on a shirt that buttons down the front?	3.50	VD	1.10	ND
5. Putting on your pants?	3.25	D	1.10	ND
6. Placing an object on a high shelf?	3.50	VD	1.10	ND
7. Carrying a heavy object of 10 pounds (4.5 kg)?	3.45	VD	1.20	ND
8. Removing something from your back pocket?	3.25	D	1.15	ND
General Weighted Mean	**3.38**	**D**	**1.15**	**ND**

Legend:

WM = Weighted Mean
R = Rank
I = Interpretation
D = Difficult
ND = No Difficult

Table 1.2 presents the level of difficulty the respondents experienced upon the performance of the following activities: washing your hair, washing your back, putting on an undershirt or jumper, putting on a shirt that buttons down the front, putting on your pants, placing an object on a high shelf, carrying a heavy object of 10 pounds (4.5 kg) and removing something from your back pocket. Generally, respondents' experiences difficulty in the performance of these activities as manifested by the general weighted mean of 3.38 before the administration of guasha therapy. After administration of the therapy, the respondents experienced no difficulty upon the performance of these activities as manifested by the general weighted mean of 1.15 interpreted as no difficulty.

Before administration of guasha therapy, looking at the specific items, item 4 and 6 got the highest level of difficulty as indicated by the weighted mean of 3.50. Item number 7 with weighted mean of 3.45, items 1 and 2 with weighted mean of both 3.40 indicated very difficult in the performance of these activities. Items 3, 5 and 8 all obtained weighted mean of 3.25 indicating difficulty in the following activities. To reiterate, generally, respondents experienced difficulty in performing the activities. Analyzing the data, these activities are part of the daily tasks of a person. Difficulty in doing such tasks disables the respondents to perform activities of daily living.

After administration of the therapy, looking at the specific items, all activities are in the range of 1.10 to 1.20; these were all interpreted as no difficulty. Since the previous table indicated that there is no pain upon the performance of the different procedures, therefore it is understood that no difficulty upon the performance of the different activities are experience by the respondents. It is interesting to note that from the general weighted mean of 3.38 which indicates difficulty of respondents upon performing the activities, it generally lowered down to 1.15 with no difficulty. Thus, it can be concluded that most likely, guasha therapy is effective to decrease the pain of the respondents.

According to Healthline.com, as reviewed by Dr. George Krucik, the shoulder has a wide and versatile range of motion. When something goes wrong with the shoulder, it hampers the ability to move freely and can cause a great deal of pain and discomfort. Furthermore affecting the capacity of a person to perform activities of daily living.

Range of motion (ROM)

Table 1.3: Result of Weighted Mean on the Level of Pain of the Respondents According to ROM Before and After Guasha Therapy

Level of pain upon performing…	Before		After	
	WM	I	WM	I
1. Flexion	3.35	MoP	1.10	NP
2. Extension	3.35	MoP	1.10	NP
3. Abduction	3.40	SP	1.20	NP
4. Adduction	3.25	MoP	1.20	NP
5. Outward Rotation	3.35	MoP	1.15	NP
6. Inward Rotation	3.35	MoP	1.15	NP
General Weighted Mean	**3.34**	**MoP**	**1.15**	**NP**

Legend:

WM	=	Weighted Mean
R	=	Rank
I	=	Interpretation
MoP	=	Moderate Pain
NP	=	No Pain

Table 1.3 illustrates the level of pain the respondents experienced before and after the therapy upon the performance of the following ranges of motion such as flexion, extension, abduction, adduction, outward rotation and inward rotation. In general, the respondents' experiences moderate level of pain before the therapy as manifested by the general weighted mean of 3.34. And it decreased from 3.34 to 1.15 which shows no pain for the respondents after the administration of guasha therapy.

Looking at the specific items before the therapy, abduction with 3.40 weighted mean; flexion, extension, inward and outward rotation with 3.35 and adduction with 3.25 also indicated moderate level of pain. As seen on the table, respondents experienced moderate level of pain even before the therapy. Further, data revealed that abduction causes severe pain among the respondents, while the other range of motion exercises all elicited moderate level of pain.

While after the guasha therapy, no pain was being experienced by the respondents in all range of motion activities as seen in the weighted mean of 1.10 to 1.20. It is interesting to note that from the weighted mean of 3.25 to 3.40 with moderate to severe pain as encountered by the respondents, it generally lowered down to 1.45 to 1.80 which indicates no pain after the administration of guasha therapy. Further, this result proves that the guasha therapy, an alternative medicine technique, using the Philippine carabao horn as a scraper tool can decrease the shoulder pain of the respondents.

According to National Institute of Health (NIH), men, women, and children can have shoulder problems. They occur in people of all races and ethnic backgrounds. Many shoulder problems are caused by the breakdown of soft tissues in the shoulder region. Using the shoulder too much can cause the soft tissue to break down faster as people get older. Doing manual labor and playing sports may cause shoulder problems. Therefore, shoulder pain hinders a person to perform different tasks that requires arm and hand involvement.

3.

Visual analogue scale (VAS)

Table 1.4: Result of Weighted Mean on the Level of Pain of the Respondents According to VAS Before and After Guasha Therapy

Pain Level	Before		After	
	WM	I	WM	I
1. Pain Scale	3.35	HWL	0.35	NH
General Weighted Mean	**3.35**	**HWL**	**0.35**	**NH**

Legend:

WM = Weighted Mean
R = Rank
I = Interpretation
HWL = Hurts Whole Lot
NH = No Hurt

Table 1.4 represents the pain scale the respondents experienced before and after the therapy. The table revealed a general weighted mean of 3.35 before the therapy. This indicates hurts whole lot in the visual analogue scale (VAS). The general weighted mean of 0.35 further indicates that the level of pain of the respondents was decreased from hurts whole lot to no hurt.

As suggested by the previous tables, pain is always present with the respondents upon the performance of different activities and range of motion exercises. This is true as indicated by the interpretation of whole lot more in the VAS. Since the shoulder is affected, pain is inevitable especially on movements that require force or application of pressure. Further, this shoulder pain greatly affects the performance of the respondents on their daily activities and tasks. To reiterate, the pain of whole lot more is a serious hindrance to continue activities of daily living resulting to poor physical activity.

It is interesting to note that the weighted mean shows no pain for the respondents which further indicates that the guasha therapy was effective as a pain reliever to the respondents' shoulder pain. To reiterate, the therapy lessened the level of pain of the respondents from 3.35 to 0.35.

Similar to the present research, a study published in the journal Pain Medicine by German researchers (2009) concluded that guasha has beneficial short-term effects on pain and functional status in chronic neck pain patients, but in the result of the study, its value in the long-term remains to be seen. Thus, proving more that guasha therapy was effective for pain.

Problem 2: What is the level of pain of the controlled group before and after spoon therapy in terms of:

Shoulder pain and disability index (SPADI)

Level of pain upon performing…	Before		After	
	WM	I	WM	I
1. At its worst?	4.45	IP	2.15	MiP
2. When lying on the involved side?	3.75	SP	1.80	MiP
3. Reaching for something on a high shelf?	3.75	SP	1.80	MiP
4. Touching the back of your neck?	3.90	SP	1.65	NP
5. Pushing with the involved arm?	4.15	SP	1.85	MiP
General Weighted Mean	**4.00**	**SP**	**1.85**	**MiP**

Legend:

WM = Weighted Mean
R = Rank
I = Interpretation
SP = Severe Pain
MiP = Mild Pain

Table 2.1 presents the level of pain of the respondents according to SPADI before and after the administration of spoon therapy. The general weighted mean of 4.00 indicates that generally, the respondents experienced severe pain upon performing the following activities before the therapy. It is interesting to note that the general weighted mean decreased from 4.00 to 1.85 which indicates that the level of pain of the respondents decreased after the administration of the spoon therapy.

Before the spoon therapy, it was gleaned that the respondents had been experiencing severe pain on their shoulder on four situations given and intense pain on the other situation before the administration of spoon therapy. The situations where severe pain was observed were: When lying on the involved side with a weighted mean of 3.75; reaching for something on a high shelf with 3.75; touching the back of your neck with 3.90 and pushing with the involved arm with 4.15. Meanwhile, the only situation with the respondents experiencing intense pain is when it is at its worst pain level with 4.45 weighted mean.

As a whole, the respondents had experienced severe pain on the shoulder as revealed by the general weighted mean of 4.00 prior to the administration of spoon therapy. It is therefore with great interest to promote an alternative therapy on treating pain or lessening the discomfort that it causes. As a person is experiencing pain, activities of daily living might be affected.

After the administration of spoon therapy, mild pain were felt by the respondents on four situations namely: At its worst with 2.15 weighted mean; when lying on the involved side with 1.80; reaching for something on a high shelf with 1.80 and pushing with the involved arm with 1.85. While touching the back of the neck showed no pain by the respondents as seen in the 1.65 weighted mean. To reiterate, a decrease on the pain level of the respondents was observed as

indicated in the general weighted mean. It is interesting to note that the therapy was effective as evidenced by the 1.85 weighted mean that shows mild pain by the respondents.

According to the Canadian Pain Coalition, pain can have negative effects on your body. Pain can affect your mental well-being, sleep patterns, your relationships, your ability to work, your posture and mobility, and it often affects your lifestyle choices. Pain may have caused you to avoid exercise, either out of fear of reinjury or because movement makes your pain worse.

Table 2.2:Result of Weighted Mean on the Difficulty of the Respondents According to SPADI Before and After Spoon Therapy

Level of difficulty upon performing…	**Before**		**After**	
	WM	**I**	**WM**	**I**
1. Washing your hair?	3.60	VD	1.75	ND
2. Washing your back?	3.60	VD	1.75	ND
3. Putting on an undershirt or jumper?	3.65	VD	1.80	SD
4. Putting on a shirt that buttons down the front?	3.55	VD	1.75	ND
5. Putting on your pants?	3.70	VD	1.85	SD
6. Placing an object on a high shelf?	3.60	VD	1.85	SD
7. Carrying a heavy object of 10 pounds (4.5 kg)?	3.70	VD	1.85	SD
8. Removing something from your back pocket?	3.65	VD	1.70	ND
General Weighted Mean	**3.63**	**VD**	**1.79**	**ND**

Legend:

WM = Weighted Mean
R = Rank
I = Interpretation
VD = Very Difficult
ND = No Difficult

Table 2.2 presents the level of difficulty of the respondents according to SPADI before and after the administration of spoon therapy. The general weighted mean of 3.63 indicates that generally, the respondents are having a very difficult time upon performing the activities. After spoon therapy was applied to the respondents, it was gleaned that the respondents do not find it difficult to perform the activities as indicated by the general weighted mean of 1.79.

Before administration of spoon therapy, it was gleaned that the respondents had been experiencing a very difficult time on performing all eight activities namely: washing your hair; washing your back; putting on an undershirt or jumper; putting on a shirt that buttons down the front; putting on your pants; placing an object on a high shelf; carrying a heavy object of 10 pounds and removing something from your back pocket. This entire situation has a weighted mean range of 3.40 to 4.19 which falls on the very difficult category. It is noticeable that the

following activities were just activities of daily living and yet, the respondents are having a hard time on performing such tasks.

After spoon therapy was applied, findings show that the difficulty felt was lessened from very difficult to not difficult, some of the situations to where the respondents had experienced a very difficult time before administration of spoon therapy had decreased. These situations include: washing your hair; washing your back; putting on a shirt that buttons down the front and removing something from your back pocket. While some shows a slightly difficult activities for the respondents namely: putting on an undershirt or jumper; putting on your pants; placing an object on a high shelf and carrying a heavy object of 10 pounds.

Further, there was a decrease in the respondents' level of difficulty upon performing all the activities. From the 3.63 weighted mean which indicates very difficult to 1.79 which signifies not difficult for the respondents upon performing the different activities.

Furthermore, it is important for the respondents to resume their activities of daily living by lessening or decreasing the pain and/or discomfort they are experiencing. The Department of Pain Medicine & Palliative Care, (2011) says that [pain is a perception that signals the individual that tissue damage has occurred or may be occurring.] It is subjective and very complex. Therefore, it is right and just for a health care provider to take an action regarding the patients' pain.

Range of motion (ROM)

Table 2.3: Result of Weighted Mean on the Level of Pain of the Respondents According to ROM Before and After Spoon Therapy

Level of Pain upon performing…	Before		After	
	WM	I	WM	I
1. Flexion	3.40	SP	1.50	NP
2. Extension	3.40	SP	1.50	NP
3. Abduction	3.40	SP	1.45	NP
4. Adduction	3.40	SP	1.45	NP
5. Outward Rotation	4.00	SP	1.80	MiP
6. Inward Rotation	4.00	SP	1.80	MiP
General Weighted Mean	**3.60**	**SP**	**1.58**	**NP**

Legend:

WM = Weighted Mean
R = Rank
I = Interpretation
SP = Severe Pain
NP = No Pain

Table 2.3 indicates the level of pain of the respondents before and after the therapy according to range of motion (ROM). The general weighted mean of 3.60 shows severe pain for the respondents upon performing the following range of motion. Generally, the pain level of the respondents decreased from 3.60 to 1.58 which shows no pain for the respondents.

Before the spoon therapy, outward and inward rotation with both 4.00 weighted mean ranks first and the other range of motion such as flexion, extension, abduction and adduction with 3.40 weighted mean ranks next. All categories were found as severe pain as seen in the table. Most likely, the activities of daily living of the respondents are altered because of the shoulder pain. This further implies for the need of treatment for pain.

After spoon therapy, mild pain was being experienced by the respondents in the outward and inward rotation with the weighted mean of 1.80. While no pain was being experienced by the respondents by the following range of motion: flexion, extension, abduction and adduction with a weighted mean ranging from 1.45 to 1.50. It is interesting to note that from the weighted mean of 3.40 to 4.19 with severe pain as encountered by the respondents, it generally lowered down to 1.45 to 1.80 which indicates mild and no pain.

According to treatment and management guide (2011), pain is complex, so there are many treatment options like medications, therapies, and mind-body techniques. Further, the decrease in the level of difficulty of the respondents shows that the treatment, spoon therapy, was effective.

Visual analogue scale (VAS)

Table 2.4: Result of Weighted Mean on the Level of Pain of the Respondents According to VAS Before and After Spoon Therapy

Pain Level	Before		After	
	WM	I	WM	I
1. Pain Scale	4.10	HWL	1.75	HLM
General Weighted Mean	**4.10**	**HWL**	**1.75**	**HLM**

Legend:

WM = Weighted Mean
R = Rank
I = Interpretation
HWL = Hurts Whole Lot
HLM = Hurts Little More

Table 2.4 illustrates the level of pain of the respondents before and after the therapy according to the visual analogue scale (VAS). The general weighted mean of 4.10 means that generally, the respondents are experiencing pain that hurts whole lot before spoon therapy and eventually decreased to 1.75 which denotes hurts little more.

Before the administration of spoon therapy, according to the visual analogue scale of 0 to 5, with corresponding faces that shows how intense the pain of the respondents has, most of the respondents answered four out of five as their pain scale. This may indicate a serious shoulder pain as being suffered by the respondents. It is interesting to note that the respondents are into

different sports which may aggravate the pain on their shoulder. As seen in the frequency and percentage distribution of the respondents, majority of the respondents are volleyball players which constitutes 30% of the respondents. Most likely, it can be concluded that shoulder pain are most frequent in volleyball players rather than the other team sports.

After spoon therapy, it is interesting to note that the weighted mean shows only little bit of pain for the respondents which further indicates that the spoon therapy was effective as a pain reliever to the respondents. To reiterate, the therapy lessened the level of pain of the respondents from 4.10 to 1.75.

According to Department of Pain Medicine & Palliative Care, (2011), to develop the best treatment strategies, health care professionals also classify pain based on its characteristics, its cause, or the mechanisms in the body or the mind that are probably involved in sustaining it. Furthermore, activities of the person may also aggravate the pain and it may be due to the different sport activities of the respondents.

In the same way, guasha therapy in Lauche's study was used to check its effects on pain. A before and after approach was also utilized to see if changes were felt by the patients. The data from the patients were also gathered using a visual analog scale and pressure pain thresholds. But unlike the present study, the researcher of this study focused on leg pain instead of shoulder pain. Further, both spoon and guasha therapy using Philippine carabao horn as scraper tool was used to decreased the level of pain of the respondents.

Problem 3: Is there a significant difference between the level of pain of the experimental group before and after the guasha therapy?

SPADI

Table 3.1: Result of Analysis of Variance on the Significant Difference in the Level of Pain of the Respondents Before and After Guasha Therapy According to SPADI

Variable	Computed F-Value	p-value	Decision on Null Hypothesis	Interpretation
Pain Level	7.543	0.008	Reject	Significant

$\alpha = 0.05$

Table 3.1 presents the result of analysis of variance on the significant difference in the level of pain of the respondents before and after guasha therapy according to SPADI.

The test of significant difference revealed a computed F-value of 7.543. The F value is the ratio of two mean square values. If the null hypothesis is true, you expect F to have a value close to 1.0 most of the time. A large F value means that the variation among group means is more than it is expected to see by chance. The computed p-value is 0.008. Since the p-value is less than the 0.05 level of significance indicating that the interpretation is significant. This implies that there is a significant difference in the level of pain of the respondents according to SPADI before and after the administration of guasha therapy. Analyzing the data, this indicates that guasha therapy using the Philippine carabao horn affects the pain level of the respondents. Most likely, the result would suggest that administration of the guasha therapy decreases the pain level of the respondents. Furthermore, this alternative therapy using the Philippine carabao horn may be beneficial for the

athlete respondents to use in case of shoulder pain since the result of the study shows that it alleviates the pain level.

In a study conducted by Snouffer, et al (2009), also investigates the therapeutic benefits of guasha on 40 patients with chronic neck and lower back pain. Similarly to the present study, the participants were also randomly assigned to either a treatment group, which received guasha treatment, or a waiting list control group. Seven days after the treatment, both groups were reviewed. Patients in the treatment group reported pain reduction and improved health status as compared to the control group. Furthermore, this indicates that the guasha therapy was effective.

ROM

Table 3.2 presents the result of analysis of variance on the significant difference in the level of pain of the respondents before and after guasha therapy according to ROM.

Variable	Computed F-Value	p-value	Decision on Null Hypothesis	Interpretation
Pain Level	4.500	0.125	Accept	Not Significant

$\alpha = 0.05$

The test of significant difference revealed a computed F-value of 4.500 and p-value of 0.125. Since the p-value is greater than the 0.05 level of significance indicating that the interpretation is not significant. This implies that there is a no significant difference in the level of pain of the respondents according to range of motion before and after the administration of guasha therapy. Analyzing the data, this indicates that guasha therapy does not affect the pain level of the respondents in terms of ROM. Most likely, the result would not suggest that the alternative medicine affect the pain level of respondents since the result of ANOVA revealed no significant difference.

According to Regenexx.com (2014), shoulder pain is a very common complaint, but shoulder surgery is particularly difficult due to the complexity of the joint. Post surgical recovery can be painful and typically requires a lengthy rehabilitation period to restore strength and mobility to the shoulder. In line with the goal of the present study of using an alternative medicine, another alternative to shoulder surgery is Regenexx procedures that may help alleviate shoulder pain and the conditions that cause it with a simple office injection procedure. Patients typically experience little to no down time from the procedure.

SPADI, ROM AND VAS

Table 3.3: Result of Analysis of Variance on the Significant Difference in the Level of Pain of the Respondents Before and After Guasha Therapy

Variable	Computed F-Value	p-value	Decision on Null Hypothesis	Interpretation
Pain Level	9.282	0.000	Reject	Significant

$\alpha = 0.05$

Table 3.3 presents the result of analysis of variance on the significant difference in the level of pain of the respondents before and after guasha therapy.

The test of significant difference revealed a computed F-value of 9.282 and p-value of 0.000. Since the p-value is less than the 0.05 level of significance indicating that the interpretation is significant. This implies that there is a significant difference in the level of pain of the respondents before and after the administration of guasha therapy. Analyzing the data, this indicates that guasha therapy affects the pain level of the respondents in general. Most likely, the result would suggest that administration of the guasha therapy decreases the pain level of the respondents. To reiterate, guasha therapy decreased the level of pain of the respondents proving that the alternative therapy has an effect to the athletes. This alternative therapy can be useful and very accessible because it does not require any license to perform such therapy instead proper training will do.

According to Pain Relief Professionals (2003), it is not surprising that many cases of shoulder pain fall into the category of "sports related injuries." Overly aggressive exercise programs are also responsible for much shoulder pain. Besides repetitive movements found in sports, there are many activities in the workplace that produce shoulder pain. This can happen to anyone at anytime who overused the shoulder. Further, needing a more accessible but effective therapy such as guasha therapy.

Problem 4: Is there a significant difference between the level of pain of the controlled group before and after the spoon therapy?

SPADI

Table 4.1: Result of Analysis of Variance on the Significant Difference in the Level of Pain of the Respondents Before and After Spoon Therapy According to SPADI

Variable	Computed F-Value	p-value	Decision on Null Hypothesis	Interpretation
Pain Level	4.474	0.038	Reject	Significant

$\alpha = 0.05$

Table 4.1 presents the result of analysis of variance on the significant difference in the level of pain of the respondents before and after the administration of spoon therapy according to SPADI.

The test of significant difference revealed a computed F-value of 4.474 and p-value of 0.038. Since the p-value is less than the 0.05 level of significance indicating that the decision on the null hypothesis is rejected. Therefore, the interpretation is significant. This implies that there is a significant difference in the level of pain of the respondents before and after the administration of spoon therapy. Analyzing the data, this indicates that spoon therapy was effective to relieve the pain level of the respondents according to SPADI.

In line with the present study, arthritis research (2013) suggests that respondents must try proposed exercises first to prevent future symptoms of shoulder pain because most cases of shoulder pain are not caused by anything serious and will ease within 2 weeks. In addition, learning different alternative therapies will help early cases of shoulder pain.

ROM

Table 4.2: Result of Analysis of Variance on the Significant Difference in the Level of Pain of the Respondents Before and After Spoon Therapy According to ROM

Variable	Computed F-Value	p-value	Decision on Null Hypothesis	Interpretation
Pain Level	225.333	0.000	Reject	Significant

$\alpha = 0.05$

Table 4.2 presents the result of analysis of variance on the significant difference in the level of pain of the respondents before and after the administration of spoon therapy according to ROM.

The test of significant difference revealed a computed F-value of 225.333 and p-value of 0.000. Since the p-value is less than the 0.05 level of significance indicating that the interpretation is significant. Therefore, the decision on the null hypothesis is rejected. This implies that there is a significant difference in the level of pain of the respondents before and after the administration of spoon therapy. Analyzing the data, this indicates that spoon therapy helped decreased the pain being experienced by the respondents. Further, this alternative therapy was proven effective as indicated by the result of the study.

According to physioworks.com (2014), in most cases, shoulder pain is cause by the muscles that are not strong enough or uncoordinated. Both of these dysfunctions can be normalized after a quality assessment and injury-specific exercises. Furthermore, one of the therapy that can help shoulder pain is spoon therapy.

SPADI, ROM AND VAS

Table 4.3: Result of Analysis of Variance on the Significant Difference in the Level of Pain of the Respondents Before and After Spoon Therapy

Variable	Computed F-Value	p-value	Decision on Null Hypothesis	Interpretation
Pain Level	3.707	0.023	Reject	Significant

$\alpha = 0.05$

Table 4.3 presents the result of analysis of variance on the significant difference in the level of pain of the respondents before and after the administration of spoon therapy.

The test of significant difference revealed a computed F-value of 3.707 and p-value of 0.023. Since the p-value is less than the 0.05 level of significance indicating that the decision on the null hypothesis is rejected. Therefore, the interpretation is significant. This implies that there is a significant difference in the level of pain of the respondents before and after the administration of spoon therapy. Analyzing the data, this indicates that spoon therapy affects the pain level of the respondents. Furthermore, the result of the study revealed that the spoon therapy was effective to decrease the shoulder pain of the respondents. In addition, spoon used as a scraping tool lessened the pain being experienced by the respondents.

According to Bentley (2013), spoon therapy was also being used in Indonesia and in Java. It is known as kerikan (scraping technique) or kerokan, and it is very widely used as a form of folk medicine upon members of individual households. It was also used in India for treatment of high fever symptoms. People in these countries used metal spoon and water for skin lubrication.

Problem 5: Based on the findings of the study, what guasha guidelines can be proposed?

Since the results of the study revealed a significant difference in the pain level of the respondents after the administration of guasha therapy, the guasha guidelines will focus on teaching on how to perform such therapy. The guideline contains the meaning of guasha, shoulder pain statistics, methods to perform guasha therapy and after care for the therapy to encourage and provide a guideline for the respondents to help ease the shoulder pain they had experienced.

CHAPTER V

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This study aimed to evaluate the clinical efficacy of guasha therapy for shoulder pain which result will serve as a basis for proposed guasha guidelines.

Descriptive survey was used to determine the level of pain of the respondents using the SPADI, ROM and VAS with a survey questionnaire as the tool for data gathering. Forty (40) respondents were taken through purposive sampling technique. The collected data were tallied, organized and subjected to statistical treatment. Data were then tabulated, statistically analyzed and interpreted.

The study aimed to answer the following questions:

1. What is the level of pain of the experimental group before and after guasha therapy in terms of:
    a. Shoulder pain and disability index (SPADI)
    b. Range of motion (ROM)
    c. Visual analogue scale (VAS)
2. What is the level of pain of the controlled group before and after spoon therapy in terms of:
    a. SPADI
    b. ROM
    c. VAS
3. Is there a significant difference between the level of pain of the experimental group before and after the guasha therapy in terms of:
    a. SPADI
    b. ROM
    c. VAS
4. Is there a significant difference between the level of pain of the controlled group before and after the spoon therapy in terms of:
    a. SPADI
    b. ROM
    c. VAS
5. Based on the findings of the study, what guasha guidelines can be proposed?

Summary of Findings

1. For the level of pain before and after using the guasha therapy:

a. Result of the level of pain according to Shoulder Pain and Disability index (SPADI) before using the guasha therapy marked at 3.57-weighted mean interpreted as severe pain, after the therapy weighted mean remarked at 1.3, interpreted as no pain. Result of weighted mean in terms of difficulty before the therapy was noted at difficult with the weighted mean of 3.38, after the therapy, 1.15 mean was observed inferred as no difficulty.

b. Before the therapy, weighted mean revealed 3.34 interpreted as moderate pain experienced by the respondents. Positive results were observed after the therapy, which results to no pain with the weighted mean of 1.15.

c. Hurts whole lot was noted as the pain level of the respondents with 3.35 mean before the administration of guasha therapy, After the guasha therapy, weighted mean revealed 0.35 interpreted as no pain.

2. For the level of pain before and after the spoon therapy:

a. Level of pain in terms of SPADI before the spoon therapy revealed a weighted mean of 4.00 noted as severe pain. After the administration of the therapy, positive remarks were noted with 1.85 mean read as mild pain. Level of difficulty in terms of SPADI before the administration of the spoon therapy, 3.63 mean was seen interpreted as very difficult. No difficulty was noted after performing the spoon therapy to the respondents as indicated by weighted men of 1.79.

b. Before the administration of spoon therapy, severe pain was remarked with 3.60 mean. No pain was noted after the spoon therapy evidenced by weighted mean of 1.58.

c. Hurts whole lot was remarked as experienced by the respondents before the spoon therapy with 4.10 mean, after the therapy, weighted mean revealed 1.75 interpreted as hurts little more.

3. For the significant difference in the level of pain of the respondents before and after the guasha therapy:

a. There is a significant difference in the level of pain experienced by the respondents before and after the administration of guasha therapy according to SPADI.

b. There is no significant difference in the level of pain experienced by the respondents before and after the administration of guasha therapy according to ROM.

c. There is a significant difference in the level of pain experienced by the respondents before and after the administration of the guasha therapy.

4. For the significant difference in the level of pain before and after the administration of spoon therapy:

a. There is a significant difference in the level of pain experienced by the respondents before and after the administration of spoon therapy according to SPADI.

b. There is no significant difference in the level of pain experienced by the respondents before and after the administration of spoon therapy according to ROM.

c. There is a significant difference in the level of pain experienced by the respondents before and after the administration of the spoon therapy.

5. Based on the result of the study, guasha guidelines was made in a form of a flyer that contains shoulder pain statistics, materials used for guasha therapy and different guasha methods appropriate for the result obtained in the study.

Conclusions

The researcher arrived at the following conclusions based on the summary of findings:

1. Generally, severe pain was being experienced by the respondents. Guasha therapy helped lowered down the pain level to mild pain or no pain at all.
2. The respondents are having a difficult time to perform activities before administration of guasha therapy and yet after the therapy, no difficulty to perform tasks was observed.
3. Most of the result denotes significant difference in the level of pain of the respondents before and after the administration of guasha therapy.

Given the findings of the study, it is therefore concluded that guasha therapy as an alternative and complementary medicine has been efficacious to decrease shoulder pain. It is revealed that the levels of pain of the respondents were decreased after they underwent a session of guasha therapy on their shoulder. Therefore, the hypothesis is rejected.

Recommendations

Considering the outcome of this study, the following are recommended:

1. The researcher would like to recommend the guasha therapy guidelines prepared aiming to help the university athletes especially those who are suffering from shoulder pain to have an alternative treatment on pain.
2. It is also recommended for the city wide health centers to include or integrate complementary and alternative treatments such as guasha for treating pain on shoulder pain.
3. It is recommended to conduct another study regarding guasha therapy to validate the findings of this study and maximize the therapeutic effects of guasha massage.

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UNIVERSITY OF MAKATI

J.P. Rizal Extension, West Rembo, Makati City

COLLEGE OF ALLIED HEALTH STUDIES
CENTER OF COMPLIMENTARY & ALTERNATIVE MEDICINE

Dear Respondent,

Good day!

The undersigned graduate student of the University of Makati – College of Allied Health Studies, Center of Complementary and Alternative Medicine will be conducting a study entitled: “THE CLINICAL EFFICACY OF GUASHA THERAPY FOR SHOULDER PAIN”. This study aims to determine the clinical efficacy of the Philippine carabao horn used in guasha therapy in reducing the level of shoulder pain experienced by the students of University of Makati.

In line with this, I am inviting you to participate in this experimental study. Your participation is deemed vital in the realization of the study. Thank you very much!

In addition, guasha is a traditional Chinese medicine, and is a tool that is used to release adhesions and scar tissue in muscle and fascia (the saran wrap-like covering holding your muscles together under your skin). It can be used for everything from tight neck or low back muscles to headaches, nerve entrapments like carpal tunnel, and chronic pain or tightness post-injury or post-surgery due to scarring.

Benefits: Guasha is therapeutically beneficial for patients with chronically tight muscles, which can develop over time from physical stress, poor posture or previous history of trauma. It is especially helpful for those that find that massage alone does not resolve their symptoms or that they cannot get enough muscle work or chiropractic adjusting.
Risks: Tenderness for 1-2 days after treatment, possible bruising in area of treatment.

Contraindications: Guasha should not be performed on someone taking blood-thinning medication. Please let the researcher know if you are on blood thinners or have an increased bleeding risk.

Conforme:

I have read the nature and purpose of the study. I understand the benefits, risks and contraindications of treatment noted above and hereby agree to participate in this important research activity and consent for guasha to be performed on me.

_____ _____

Respondent's Signature **Date**

UNIVERSITY OF MAKATI

J.P. Rizal Extension, West Rembo, Makati City

COLLEGE OF ALLIED HEALTH STUDIES
CENTER OF COMPLIMENTARY & ALTERNATIVE MEDICINE

"THE CLINICAL EFFICACY OF GUASHA THERAPY FOR SHOULDER PAIN"

Part I: Personal Data

1. Demographic Profile

Sport: _____

Name (Optional): _____ Age: _____

Contact Number: _____ Sex: _____

2. Medical History

Do you or have you had any of the following conditions? If yes, please indicate date of diagnosis.

Diagnosis	Date Diagnosed	Diagnosis	Date Diagnosed
Skin Disease		Hypersensitivity	
Cancer (specify)		Hepatitis	
Highblood pressure		High cholesterol	
HIV		Mental illness	
Seizures		Stroke	
Thyroid disease		Others (specify)	

Please list any surgeries or any major injuries with dates.

_____
_____

List any medications or supplements taken in the last 2 months.

_____
_____

Presence of pacemaker or any metal devices in the body? YES/NO _____

3. Family History

Indicate close family members with any of the following:

Diagnosis	Family Member	Diagnosis	Family Member
Cancer (specify)		Diabetes	
Heart disease		Highblood pressure	
Stroke		Alcoholism	
Mental Illness		High Cholesterol	
Skin Disease		Other (specify)	

4. Personal History

Average number of hours sleeping _____

Nicotine use (# of sticks/day) _____

Alcohol use (# of drinks/week and type) _____

Caffeine use (# of drinks/day) _____

Water intake (# of glass/day) _____

Briefly describe dietary habits (# of meals/day and type of food)

_____

Part II: Pre-assessment tool: *(For researcher only)*

1. With pain onset prior to 150^{o} of active shoulder elevation in any plane
   ( ) Yes ( ) No
2. Positive empty can test indicating possible supraspinatus involvement
   ( ) Yes ( ) No
3. Positive Hawkins-Kennedy test indication possible external impingement
   ( ) Yes ( ) No
4. With positive signs and symptoms of TCM diagnosis for shoulder pain
   ( ) Yes ( ) No
5. With subjective complaint of difficulty performing activities of daily living
   ( ) Yes ( ) No

**If the respondent answered five out of five yes, proceed to part III*

Part III: Shoulder Pain and Disability Index (SPADI)

This part aims to measure the level of pain in various activities that respondents perform. Put a check (√) on each box that refers to your answer regarding each question.

What is the level of pain that you experience upon performing the following activities **before** therapy?

5- Intense pain
4- Severe pain
3- Moderate pain
2- Mild pain
1- No pain

	5	4	3	2	1	*(Please do not write anything. For researchers' use only)*
1. At its worst?						
2. When lying on the involved side?						
3. Reaching for something on a high shelf?						
4. Touching the back of your neck?						
5. Pushing with the involved arm?						

What is the level of difficulty that you experience upon performing the following activities **before** therapy?

5- Intensely difficult
4- Very difficult
3- Difficult
2- Slightly difficult
1- Not difficult

	5	4	3	2	1	*(Please do not write anything. For researchers' use only)*
1. Washing your hair?						
2. Washing your back?						
3. Putting on an undershirt or jumper?						
4. Putting on a shirt that buttons down the front?						
5. Putting on your pants?						

6. Placing an object on a high shelf?						
7. Carrying a heavy object of 10 pounds (4.5 kg)?						
8. Removing something from your back pocket?						

Part IV: Range of Motion (ROM)

What is the level of pain that you experience upon performing the following range of motion **before** therapy?

5- Intense pain
4- Severe pain
3- Moderate pain
2- Mild pain
1- No pain

	5	4	3	2	1	*(Please do not write anything. For researchers' use only)*
1. Flexion						
2. Extension						
3. Abduction						
4. Adduction						
5. Outward Rotation						
6. Inward Rotation						

Part V: Visual Analogue Scale (VAS)

						(Please do not write anything. For researchers' use only)

What is the level of pain that you are experiencing **before** therapy?

Part VI: Shoulder Pain and Disability Index (SPADI)

This part aims to measure the level of pain in various activities that respondents perform. Put a check (√) on each box that refers to your answer regarding each question.

What is the level of pain that you experience upon performing the following activities **after** therapy?

5- Intense pain
4- Severe pain
3- Moderate pain
2- Mild pain
1- No pain

	5	4	3	2	1	*(Please do not write anything. For researchers' use only)*
1. At its worst?						
2. When lying on the involved side?						
3. Reaching for something on a high shelf?						
4. Touching the back of your neck?						
5. Pushing with the involved arm?						

What is the level of difficulty that you experience upon performing the following activities **after** therapy?

5- Intensely difficult
4- Very difficult
3- Difficult
2- Slightly difficult
1- Not difficult

	5	4	3	2	1	*(Please do not write anything. For researchers' use only)*
1. Washing your hair?						
2. Washing your back?						
3. Putting on an undershirt or jumper?						
4. Putting on a shirt that buttons down the front?						
5. Putting on your pants?						
6. Placing an object on a high shelf?						
7. Carrying a heavy object of 10 pounds (4.5 kg)?						
8. Removing something from your back pocket?						

Part VII: Range of Motion (ROM)

What is the level of pain that you experience upon performing the following range of motion **after** therapy?

5- Intense pain
4- Severe pain
3- Moderate pain
2- Mild pain
1- No pain

	5	4	3	2	1	*(Please do not write anything. For researchers' use only)*
1. Flexion						
2. Extension						
3. Abduction						
4. Adduction						
5. Outward Rotation						
6. Inward Rotation						

Part VIII: Visual Analogue Scale (VAS)

What is the level of pain that you are experiencing **after** therapy?

						(Please do not write anything. For researchers' use only)

UNIVERSITY OF MAKATI

J.P. Rizal Extension, West Rembo, Makati City

COLLEGE OF ALLIED HEALTH STUDIES
CENTER OF COMPLIMENTARY & ALTERNATIVE MEDICINE

July 20, 2014

TO: TOMAS B. LOPEZ JR
President
University of Makati

Sir:

Greetings!

The undersigned graduate student of the University of Makati – College of Allied Health Studies, Center of Complementary and Alternative Medicine will be conducting a study entitled: **"THE CLINICAL EFFICACY OF GUASHA THERAPY FOR SHOULDER PAIN"**. In parallel with this, I would like to ask permission to conduct our study in the premise of your governance which is the University of Makati since the respondents of the study are the students and athletes of the university. Rest assured, the scope of this matter would mean no harm. The data to be obtained in this research activity will guide the researcher to come up with a cost-effective treatment guideline using an alternative therapy called Guasha to be of help in students suffering from shoulder pain.

The individual responses to the questionnaires by the respondents will be treated with utmost confidentiality.
We guarantee you that this research project would greatly benefit the university students to further increase the knowledge about the alternative medicine for shoulder pain which greatly affects the activities of daily living.

Your favorable consideration and approval is gratefully appreciated.

Expressing my deepest gratitude to you, your family, the council and your entire constituents. God bless.

Respectfully yours,

Enrico Santos, RN, MPH
Researcher – Center for Complementary and Alternative Medicine

UNIVERSITY OF MAKATI

J.P. Rizal Extension, West Rembo, Makati City

COLLEGE OF ALLIED HEALTH STUDIES
CENTER OF COMPLIMENTARY & ALTERNATIVE MEDICINE

July 20, 2014

TO: DR. HAEDEOK LEE
Executive Director – Center for Complementary and Alternative Medicine
University of Makati

Dear Sir:

Greetings!
The undersigned graduate student of the University of Makati – College of Allied Health Studies, Center of Complementary and Alternative Medicine will be conducting a study entitled: “THE CLINICAL EFFICACY OF GUASHA THERAPY FOR SHOULDER PAIN”. This study aims to determine the clinical efficay of the Philippine carabao horn used in guasha therapy in reducing the level of shoulder pain experienced by the students of University of Makati.

In this connection, I humbly request your expertise and time to kindly validate the survey questionnaire in order to commence the actual floating of the said tool.

Attached here with are the sample of survey questionnaire and statement of the specific problem. Thank you and may God bless you.

Respectfully yours,

Enrico Santos, RN, MPH

Researcher – Center for Complementary and Alternative Medicine

ENRICO S. SANTOS, RN, MPH

+63 917 893 6349
endixsantos@yahoo.com

TECHNICAL COMPETENCIES

Complementary and Alternative Medicine Practitioner. Non invasive Acupuncture, Color Acupuncture Tuina Massage, Moxibustion, Guasha, Balance Taping Medicine, CAM in Sports Athlete, Oriental Medicine, Hilot Massage, Wellness Massage. Developed Guasha Tools (Carabao Horn Massager).

Research Panel, Adviser and Consultant for Post Graduate and Undergraduate Program University of Makati and other Hospital.

Program and Project Planning, Management, Monitoring and Evaluation. Familiar with area-based planning, strategic planning, situational analysis, FHSIS and community diagnosis.

Training Design, Coarse Syllabus, and Need Assessment. Community health and development, Graduate and Undergraduate allied health Program, K11, K12, OBE.

Operational Research. Substantial experience in field based operation research
Survey Research. Familiar with sampling, questionnaire design, data collection, management and data analysis.

Epidemiology and Surveillance. Strongly Familiarity Outbreak Response Immunization like Acute Flaccid Paralysis, Neonatal Tetanus, and Measles.

Expanded Program on Immunization. Strongly familiarity immunizable Disease, Cold Chain Management, Adverse-Event on Field Immunization.

Public Health Nurse. Care of Maternal and Child, Safe Motherhood and Child Health, Safe Motherhood on Family Planning, Prevention and Control of Infectious Diseases, Promotion of healthy lifestyle and Health Education and Promotion Campaign.

Paramedics. Emergency Transport, Search and Rescue, Disaster Preparedness and Management.

CAREER

Director, Graduate Program, Research, and New Program.
College of Allied Health Studies University of Makati, Makati City
(2013 – Present)

Complementary and Alternative Medicine Practitioner
MEDCITI Multispecialty and Diagnostic Clinic, A Bonifacio Avenue Tanong Marikina
(2013 - Present)

Director Multi-learning
Community Health and Development
College of Nursing University of Makati, Makati City
(2005 – 2013)

Professor in Center of Complementary and Alternative Medicine
Center of Complementary and Alternative Medicine University of Makati, Makati City
(2012 – Present)

Associate Professor/Clinical Instructor/Coordinator of RLE-CHD
Graduate and Undergraduate Program University of Makati
(2005 – Present)

Reviewer for National Licensure Examination
NLE Nursing Board exam- Makati Olongapo, Quezon
(2006 – 2012)

Clinical Instructor
Caregiver ICOPE Pasig City
(2003)

Operational Research Project Management, Field Consultant Chemonics
International Inc. (under US Agency, International Development) for Philippine Tuberculosis Initiative for Private Sector (PhilTIPS)
(2004 – 2005)

Public Health Nurse Supervisor
Marikina City Health Office, Marikina City
(1994 – 2005)

Paramedics Team Leader
Rescue 161, City Government of Marikina

EDUCATION AND PROFESSIONAL ACHIEVEMENTS

Doctor of Science in Complementary and Alternative Medicine
Center of Complementary and Alternative Medicine, University of Makati
(2012 – Present)

Master of Public Health
Institute of Family and Community Health Inc.

(2001)

BS Nursing

De Ocampo Memorial College Manila
(1990 – 1993)

National Certification 2

TESDA for Wellness Massage, Pinoy Hilot
(2013)

Hospital Financial Management

College of Public Health University of the Philippines
(2000)

Basic Course on Management of the Health System to Middle level Health Professional

College of Public Health University of the Philippines
(2000)

President

City Health Office Nurses Association, Marikina City
(2002 – 2003)

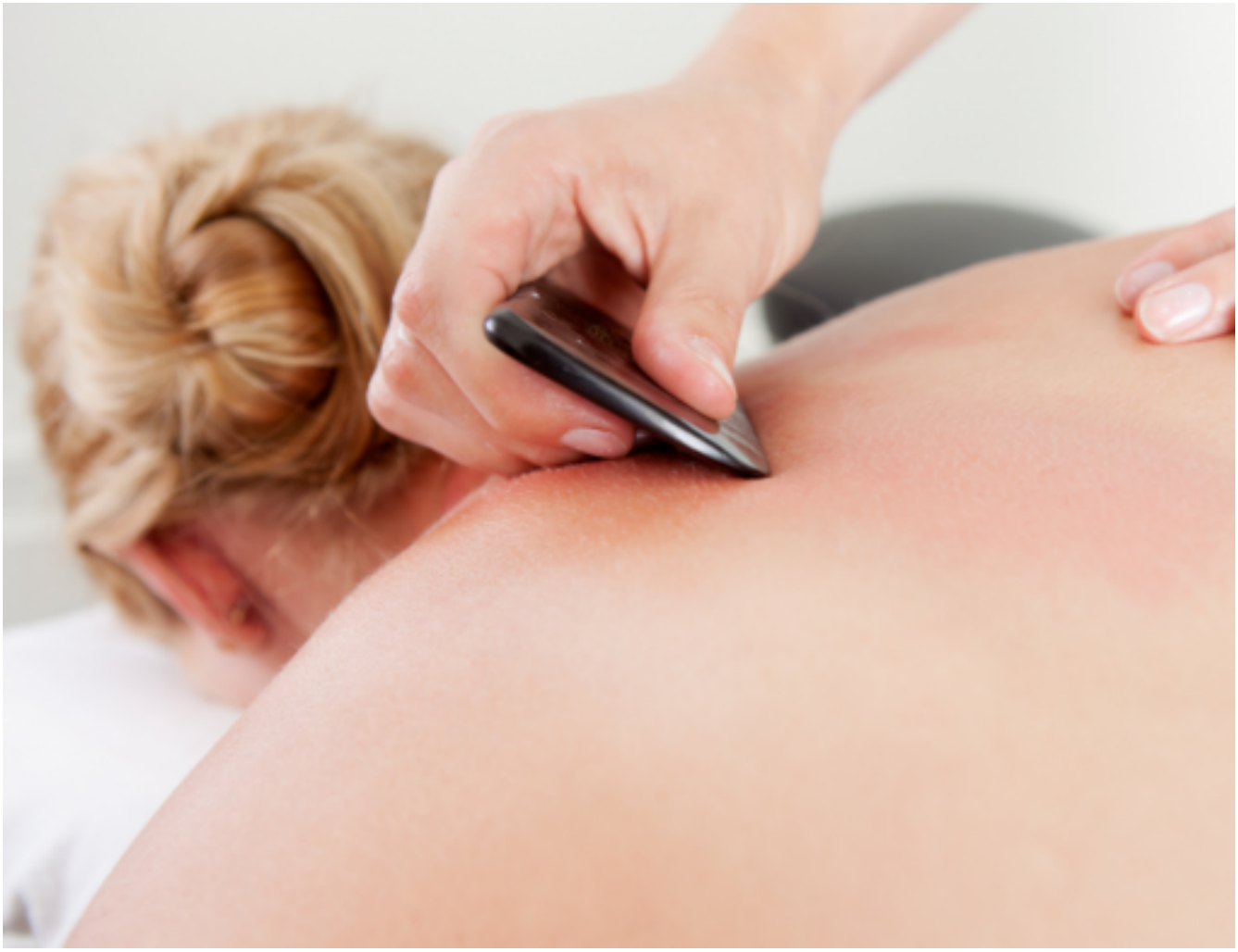
Member

National League of Government Nurses, Philippine Nurses Association, American Public Health Association

Program Coordinator

Marikina City
Expanded Program on Immunization (1995 – 2004)
Epidemiology Surveillance (1999 – 2004)
Urban Health and Nutrition Project (UHNP) (1996 – 2000)

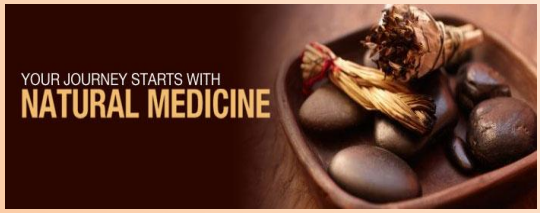
BOOST YOUR HEALTH WITH GUASHA



ENRICO S. SANTOS RN, MPH

GUASHA

For Shoulder Pain



Guasha is typically performed by rubbing a smooth-edged instrument across the skin surface where a subcutaneous injury or imbalance resides. When treatment is effective, distinctive reddening of the skin, known as **sha,** is observed. This is a positive response and brings the immediate and lasting benefit of dispelling wind, reducing heat and inflammation, eliminating coldness, and releasing pain from the superficial and deeper levels of the body. Guasha is used to treat many acute and chronic health problems including colds and flu, fever, headache, indigestion, dizziness, injury, joint pain, fibromyalgia and heat exhaustion. It is also commonly performed to relax tight and aching muscles and to relieve tiredness and fatigue. The stroking action of guasha to the points and channels can also be practiced as a health enhancement method, and can even be performed through light clothing (without the intention of raising sha) (Bentley, B., 2009).

Shoulder Pain

The shoulder is the most mobile joint in the human body. A group of four tendons in the shoulder, called the rotator cuff,

allows the shoulder a wide range of motion. Swelling, damage, or bone changes around the rotator cuff can cause shoulder pain. (Medline Plus, 2014)

In 2006, approximately 7.5 million people went to the doctor's office for a shoulder problem, including shoulder and upper arm sprains and strains. More than 4.1 million of these visits were for rotator cuff problems.

Shoulder injuries are frequently caused by athletic activities that involve excessive, repetitive, overhead motion, such as swimming, tennis, pitching, and weightlifting. Injuries can also occur during everyday activities such washing walls, hanging curtains, and gardening. (OrthoInfo, 2009)

In the Philippines, 10.2% of the population experienced shoulder pain. It ranked third as the most common occupational diseases in the 2011 to 2012 Bureau of Labor and Employment Statistics (BLES) Integrated Survey. (Philippine Statistical Authority, 2014)

Guasha Guidelines:

Guasha is applied primarily on the back, neck, shoulders, buttocks and limbs. A thickish oil is spread over the area to be rubbed. The instrument is held comfortably in the hand and the practitioner usually makes 10 to 30 strokes in a downward direction. A simple measure to be certain the force used is correct is to ask the person receiving if they are comfortable with the pressure. For best results, guasha is

Shoulder Pain

emphasized on both local and distal acupuncture points determined by diagnosis.

Working on these points can help you get better quicker. You do not have to use all of these points. Using just one or two of them can be effective. (Refer to the illustrations on the next page)

Points (A) -- Gates of Consciousness

Location: Below the base of the skull, in the hollow between the two large vertical neck muscles, two to three inches apart depending on the size of the head.

Benefits: Relieves arthritis in the shoulders and neck, headaches, and stiff neck.

Points (B) -- Shoulder Well

Caution: Pregnant women should press lightly on this point.

Location: On the muscle at the highest point of the shoulder, one to two inches out from the side of the lower neck.

Benefits: Relieves shoulder tension, nervousness, irritability, and fatigue.

Points (C) -- Heavenly Rejuvenation

Location: On the shoulders, midway between the base of the neck and the outside of the shoulders, one-half inch below the top of the shoulders.

Benefits: Relieves muscular tension, stiff necks, and shoulder pain.

Points (D) -- Outer Arm Bone

Location: On the outer surface of the upper arm one-third of the way down from the top of the shoulder to the elbow. Find a wiry muscle band by rubbing the fingers over the bone on the outside of the arm.

Benefits: Relieves aching in the arm, shoulder tension, and stiff necks.

Materials used for GUASHA

Guasha Oil

Scaper Tool – Buffalo Horn

Scaper Tool – Jade

Scraper Tool

PHILIPPINE CARABAO HORN

Method of practice in general:

If right handed then hold the guasha instrument in the right hand. The arm should be comfortable and relaxed.

1. The scraper tool should be held at a 45-degree angle to the area to treat.
2. Begin with soft scraping for the first few strokes, then apply a little more pressure if required. From this point, do not get heavier with scraping. Remain consistent, applying a suitable strength and rhythm.
3. Try to perform long (15–18 cm or about 6–7 inches) uninterrupted strokes where possible.
4. Scrape in the same direction, ie. downwards – do not scrape downwards and draw back upwards.
5. Each stroke should be performed between 10 and 30 times before proceeding to the next area.
6. Once an area is completed, cover it up immediately with a towel to keep warm.

Note: Be extra careful not to scrape over any mole, pimple or irregular skin area. To protect a mole, place a finger over it to guard against contact. Open windows, drafts, fans and air conditioning are not recommended during treatment to avoid pathogenic wind entering the open skin pores.

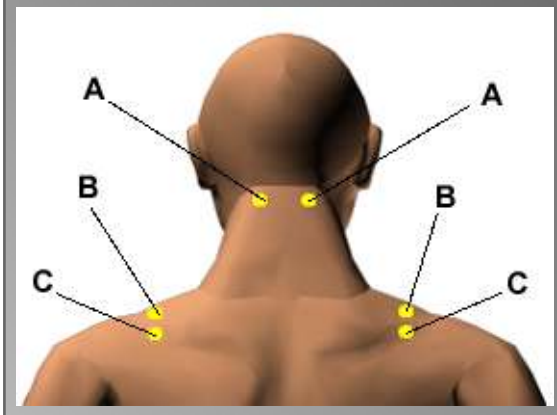
Method of Practice for Shoulder Pain:

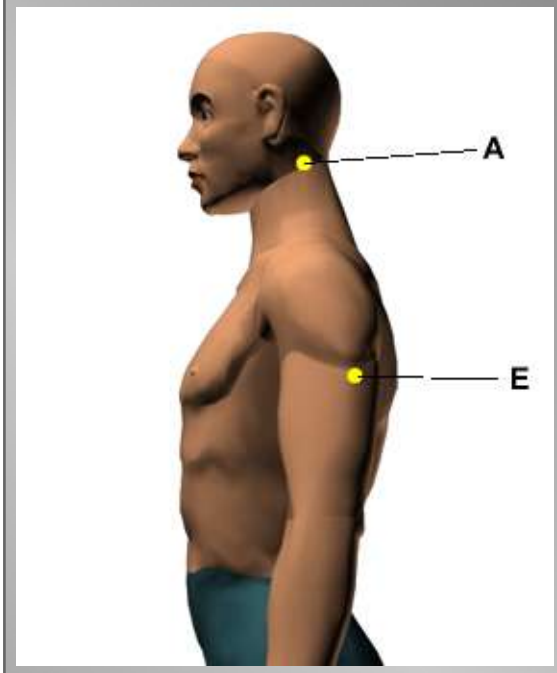
Method 1: Apply **rigorous scraping** method to scrape the oblique zone posterior to vertex without guasha oils. Searching sensitive points of pain to give more scraping until it becomes slight pink or hot.

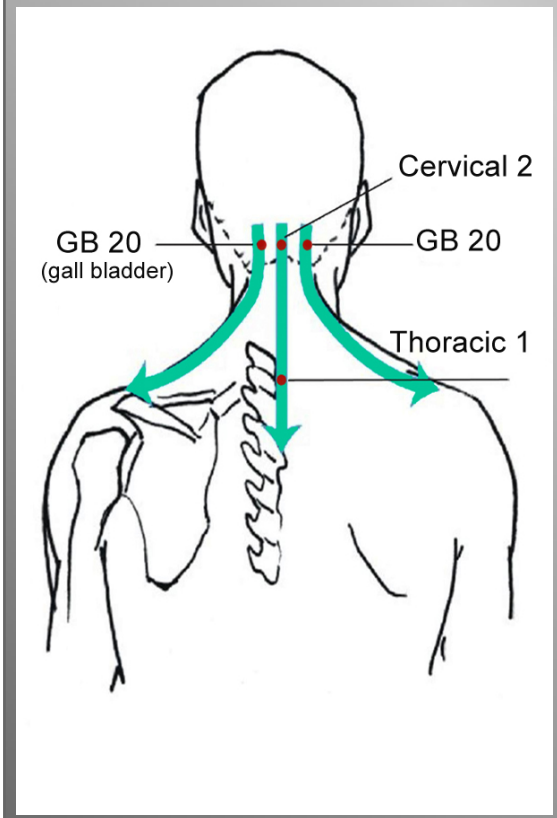
Method 2: Spread guasha oil on Jianjing (GB21) and shoulder, then apply **board scraping** method to scrape downward to the lower part of the shoulder and give more scrapings to the areas of pain and nodules.

Apply **board scraping** method to upper part of shoulder from medial to lateral, from upper to lower and give more scrapings to the area of pain and nodules.

Acupoints for Shoulder Pain:







Method 3: Apply **rigorous scraping** method to scrape the middle 1/3 section of anterior and posterior oblique zone of vertex-temple without oil and search tender spots to give more scraping until it becomes slight pink or hot.

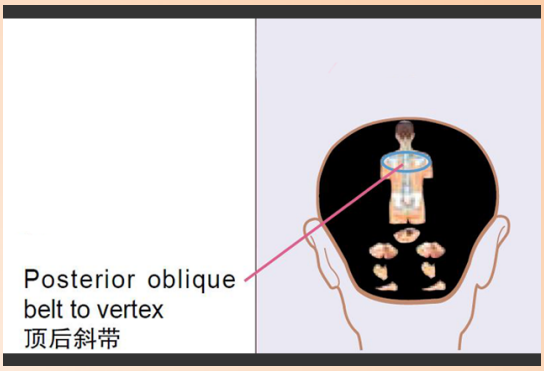
Method 4: Spread guasha oil on Waiguan (TE 5), superior to the wrist and Zhongzhu (TE 3) at the back of the hand, then apply **board scraping** method to scrape Waiguan (TE 5) downward. Vertically press and knead Zhongzhu (TE 3).

Method 5: Spread oil on the anterior axillary line, then apply **one corner scraping** method to scrape downward along the line and give more scrapings to areas of pain and nodules.

After spreading guasha oil on the lateral side of the elbow, apply **board scraping** method to scrape downward and give more scrapings to areas of pain and nodules.

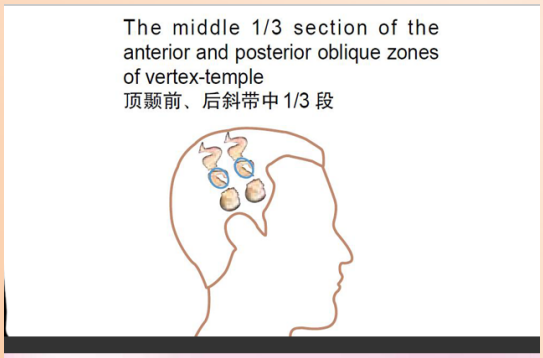
If shoulder pain lasted for the long time, the obvious tender points or nodules in different sizes, tightness and spasm of muscles will appear in Jianjing (GB 21), superior part of shoulder, anterior and posterior axillary lines. As scraping, we should reach these positive reactions. We should scrape slowly and combine with kneading manipulation, which may relieve pain effectively.

Application of Guasha:



Method 1

Method 2



Method 3

After Guasha:

1. Rest for a while and drink a glass of warm water.
2. Do not shower or bathe within one hour after treatment. A cold water shower or bath should be avoided for at least 24 hours.
3. It is important to keep all treatment areas covered up and warm. They should also be sure to keep away from windy conditions including fans and air-conditioning.

Cautions and Contraindications:

Take care to avoid pimples, moles and other skin irregularities that may be scratched or broken if an instrument is rubbed over. Care must also be taken to rub the area with appropriate pressure. The first rule of any therapeutic procedure is DO NO HARM.

Do not apply guasha:

1. To people who are too weak to tolerate the treatment.
2. To people with bleeding disorders.
3. To people who are taking anti-coagulant medication, eg. warfarin.
4. During pregnancy.
5. Soon after surgery.
6. Over varicose veins, skin disease or open wounds, scratches etc.
7. To a person suffering from a serious communicable disease.
8. Within one hour before or after eating.

References: Bentley, B. (2013); Medline Plus (2014); OrthoInfo (2009); Philippine Statistical Authority (2014); Herbal Shop (2013)

Method 4

Method 5

Actual Photos of Guasha Therapy

GUASHA THERAPY PATIENTS:

This method doesn't cost money, it's effective and I can avoid waiting in a long queue to see a doctor.
– Male aged 21

It really works and I don't need to take medicine.
– Female aged 17

It gives quick result. My first preference is to treat myself before I go to see a doctor.
– Male aged 51

It is quick, convenient and effective.
– Male aged 18