

# THE EFFECTIVENESS OF DRY CUPPING AND HOT PACK ON PAIN RELIEF AND REDUCED FUNCTIONAL DISABILITY FOR PATIENTS WITH NON-SPECIFIC LOW BACK PAIN

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THE EFFECTIVENESS OF DRY CUPPING AND  
HOT PACK ON PAIN RELIEF AND REDUCED  
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WITH NON-SPECIFIC LOW BACK PAIN

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## ABSTRACT

The objective of this study was to identify the effectiveness of dry cupping and hot pack on pain relief and reduced functional disability for patients with non-specific low back pain. The study design was experimental study using pre-test and post-test measurements. A total of 39 patients with non-specific low back pain from Sultan Idris Education University, Malaysia who fulfilled the inclusion criteria were recruited as subjects using purposive sampling methods. The subjects were randomly assigned equally (N=13) into dry cupping group, hot pack group and control group. Dry cupping group received a treatment session in a week for three weeks, hot pack group received two treatment sessions twice a week, and control group received no treatment, but continue previous treatment from general practitioner. Numerical Pain Rating Scale was used to measure pain intensity and Oswestry Disability Index was used to measure functional disability before and after the intervention for all three groups. Data was analysed using one-way ANOVA with significant level predetermined at  $p < 0.01$  prior to study. The study findings revealed that patients in both dry cupping group and hot pack group indicating significant differences on pain relief [F (21.331),  $p = 0.000$ ] and reduced functional disability [F (18.046),  $p = 0.000$ ] after completing three weeks interventions when compared with control group. Dry cupping and hot pack treatments are found to be equally effective, thus, both treatments could be suggested for pain relief and to reduce functional disability for patients with non-specific low back pain. The researcher is suggesting to health care professionals to consider dry cupping therapy as one of the alternative treatment options in treating patients with non-specific low back pain in order to relieve pain and to reduce functional disability.



## KEBERKESANAN BEKAM KERING DAN PEK TUAM PANAS BAGI MENGURANGKAN SAKIT DAN KETIDAKUPAYAAN FUNGSI PADA PESAKIT SAKIT BELAKANG TIDAK SPESIFIK

### ABSTRAK

Tujuan kajian ini dijalankan bagi membandingkan keberkesanan antara bekam kering dan pek tuam panas dalam melegakan kesakitan dan mengurangkan ketidakupayaan berfungsi dalam kalangan pesakit sakit belakang tidak spesifik. Kaedah eksperimen ini menggunakan pengukuran ujian pra dan pasca. Sejumlah 39 subjek dari Universiti Pendidikan Sultan Idris yang mengalami masalah sakit belakang tidak spesifik dan memenuhi kriteria kemasukan kajian dipilih menggunakan teknik persampelan bertujuan. Semua subjek telah dibahagikan sama rata ( $N=13$ ) secara rawak kepada tiga kumpulan iaitu kumpulan bekam kering, kumpulan pek tuam panas dan kumpulan kawalan. Kumpulan bekam kering menerima satu sesi rawatan seminggu, kumpulan pek tuam panas menerima rawatan dua kali seminggu manakala kumpulan kawalan tidak menerima sebarang rawatan tetapi meneruskan rawatan yang diberikan oleh pengamal am sebelum ini. Terdapat dua alat pengukuran yang digunapakai sebelum dan selepas tiga minggu rawatan iaitu Skala Penaksiran Kesakitan Numerik (*Numerical Pain Rating Scale*: NPRS) untuk mengukur tahap kesakitan yang dialami di bahagian belakang dan Indeks Ketidakupayaan Oswestry (*Oswestry Disability Index*: ODI) untuk mentafsir peratus ketidakupayaan berfungsi disebabkan sakit belakang yang dialami. Analisis data dibuat menggunakan ANOVA sehala dengan paras signifikan  $p < 0.01$  sebelum kajian. Hasil kajian menunjukkan terdapat perbezaan signifikan terhadap pengurangan tahap kesakitan [ $F(21.331)$ ,  $p = 0.000$ ] dan ketidakupayaan berfungsi [ $F(18.046)$ ,  $p = 0.000$ ] selepas tiga minggu intervensi dalam kumpulan bekam kering dan pek tuam panas apabila dibandingkan dengan kumpulan kawalan. Kesimpulannya, kedua-dua kumpulan eksperimen iaitu bekam kering dan pek tuam panas didapati sama-sama berkesan untuk digunapakai dalam melegakan kesakitan dan mengurangkan ketidakupayaan berfungsi dalam kalangan pesakit sakit belakang tidak spesifik. Profesional penjaga kesihatan dicadangkan untuk mempertimbangkan bekam kering sebagai salah satu rawatan alternatif pilihan dalam merawat pesakit yang mengalami masalah sakit belakang tidak spesifik supaya dapat melegakan kesakitan dan mengurangkan ketidakupayaan berfungsi.



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## CHAPTER 1

### INTRODUCTION

Low back pain has become major health problem worldwide with well-recognize of disabling consequences. This is proven by Global Burden of Disease Study in 2016, stated that low back pain has continue to be leading global cause of years lived with disability (GBD, 2016). In addition, Doualla et al. (2019) also stated that low back pain is leading cause of disability in high income countries in almost all Latin American, Asian, and Middle Eastern countries. This is added by Stamm et al. (2016) who states that patient with chronic low back pain has large number of difficulties in their activity daily living (ADL) compared to patients with other musculoskeletal diseases or with other disease.



In addition, low back pain was a common injury which cause health problem and lead to activity limitation, poor self-reported of health status, impairment in interpersonal relations and community life, lack of participation and performance in workplace, less work productivity and workplace absenteeism (Farhadi et al., 2009; Grabovac & Dorner, 2019). In term of workplace absenteeism, patients with chronic low back pain were absented from work over six days in a month in Africa. In Taiwan, patients with acute and chronic low back pain were absented from work around eight days in a month. In Uganda, patients with chronic low back pain were absented from work up to 14 days of a month (Doualla et al., 2019). Thus, work absenteeism and other related factors caused by disability of low back pain are associated with economic loss and huge financial cost for many populations in various countries (Farhadi et al., 2009).



Besides, it is thought that 80 percent of peoples experience low back pain at least once in a lifetime (Kim et al., 2011; Walker, 2000). The acute stage of low back pain usually has a good prognosis with better improvement within the first six weeks. However, most of patients with low back pain may take their first episode as lightly with little expectations of recurrence. Therefore, 60 percent of recurrence low back pain occurs due to increase level of pain and functional disability (Kim et al., 2011; Hestbaek, Leboeuf-Yde, & Manniche, 2003). Furthermore, study conducted by Kim et al. (2011) revealed that if low back pain is remaining after six weeks, the subsequent healing is likely to be delayed leading to chronicity of that condition. This chronic stage with pain at low back area is attributed to non-specific low back pain.

The research in the effectiveness of treating patients with non-specific low back pain on different treatment options has been ongoing for many years in term of





pharmacological, surgical, or conservative. In pharmacological, the pharmacist will prescribe anti-inflammatory medications. In many cases, level of pain was much reduced whereas in some cases, this modern treatment causes the pain remained. Many of medication approaches can be costly and sometimes ineffective with significant adverse effects (Markowski et al., 2014; Balague' & Dudler, 2011; Farhadi et al., 2009).

Recently, clinical guidelines on non-specific chronic low back pain have suggested to reduce the use of pharmacotherapy in first line of treatment. The clinical guidelines suggest that medications should only being prescribed to patients who have insufficient respond to non-pharmacological treatments with low dosage in a short period of time. General practitioner needs to discuss with patients about the known potential harms and practical benefits of prescribed medications (Qaseem et al., 2017; Stochkendahl et al., 2018; Winkelstein et al., 2002). In addition, anti-inflammatory drugs which prescribed to treat on symptoms have multiple adverse effect to gastrointestinal problems and other system in the body (Itoh et al., 2009; Tramer et al., 2000). Thus, medications should be reviewed regularly for the prove of benefit and should be withdraw if there is no good progression (Stochkendahl et al., 2018; Winkelstein et al., 2002).

The medications which act as painkiller for chronic low back pain such as acetaminophen, ibuprofen, Nonsteroidal anti-inflammatory drugs (NSAIDs), muscle relaxants, antidepressants and anticonvulsants had been compared in various studies. For an example, there was a study which compared medication intake with placebo study, and result showed that the effects of pharmacological treatments were small to moderate and that medication can endure on low back pain in short term duration only.





Patients with non-specific low back pain refuse to take that several of drugs generally, or prolong intake of strong opioids specifically because of their awareness on adverse effects to other part of the body (Koes et al., 2018).

Instead of pharmacological way, the general practitioner will prefer conservative way by referring patients with low back pain to physiotherapist with the aim to restore movement. The last option if physiotherapy session or other interventions did not work, general practitioner will suggest to patients with low back pain to undergo surgery. Most of patients will refuse for surgery option and start seeking other alternative treatment (Poitras & Brosseau, 2008).

In beginning of standard management in physiotherapy sessions on non-specific low back pain, usually the aim of initial treatment is to overcome pain before improving range of movement on physical performance. The physiotherapist will use therapeutic modalities for pain management. Then, the treatments will be followed by manual therapy, therapeutic exercises and ergonomic activity modification in order to strengthen muscles on low back area and increase range of movement (Poitras & Brosseau, 2008).

In term of therapeutic modalities for pain management in physiotherapy usage, it is divided into physical agent or electrotherapeutic. According to Bandy and Sanders (2007), physical agents are a group of procedures with the usage various form of energy which are acoustic, aqueous or thermal including thermotherapy, cryotherapy and sound agent such as ultrasound and phonophoresis. In contrast, electrotherapeutic modalities are a group of agents using electricity including biofeedback and electrical



stimulation such as Transcutaneous Electrical Nerve Stimulation (TENS), Electrical Muscle Stimulation (EMS) and Interferential Current (IFC). The electrophysical agents had been a core usage in physiotherapy practice since the establishment of profession and it remains in physiotherapy curriculum (Kitchen, 2002; Robertson et al., 2006; Watson, 2000).

However, patients with non-specific low back pain tend to seek alternative by choosing complementary treatment for their recovery even those therapies have insufficient scientific evidence. Recently, patients with non-specific low back pain seek for cupping therapy which is complementary treatment in order to relieve their pain and discomfort. Cupping has gained an immense popularity as a treatment modality that has an element of pleasure and relaxation with therapeutic values in some medical conditions without harming the body structure (Al-Bedah, Shaban, et al., 2016; Cao et al., 2010; Dar et al., 2015). In musculoskeletal, cupping treatment is being implemented in order to reduce joint, muscle or bone inflammation, and level of pain intensity (Qureshi et al., 2017).

## 1.2 Problem Statement

Since the adults will ignore the first pain due to their own commitment and knowledge, it will recurrence and if low back pain persists more than three months, the pain will reach to chronic stage. Then, it will affect functional capacity of an individual. The essential aspect in quality of life among patients with non-specific low back pain will be reduced as the patients unable to perform daily activities independently and do not



free to govern by themselves (Duarte et al., 2012). Because of this, the effect of functional disability will relate to higher risk of hospitalization, institutionalization and death (Duarte et al., 2012).

In addition, raise of functional limitation on low back area is the obstacle for patients to continue their routine of work. The discomfort feeling drove patients with non-specific low back pain to seek for treatments. Patients with non-specific low back pain may already tried different treatments with no improvement which then led them to keep searching for another different treatment either by relative's referral or through advertisement.

The study for cupping therapy in non-specific low back pain among adult's patients is limited since it is complementary way whereby many of researchers stated that it is a better alternatives for low back pain ((AlBedah, Khalil, Elolemy, Hussein, AlQaed, et al., 2015; Farhadi et al., 2009; Huang, Choong, & Li, 2013). In contrast, general practitioner in hospital will refer to physiotherapy for conservative treatment.

Moreover, even though many researchers said that hot pack is one of the effective treatments in conservative way with no surgical procedure and medication given, patients still looking for cupping therapy to treat their non-specific low back pain. Therefore, the researcher wants to determine which treatments; either complementary or conservative is more effective to reduce pain and functional disability among the adults with non-specific low back pain. Furthermore, there are no published studies that have explore on effects of dry cupping and hot pack in a single study.



### 1.3 Significance of the Study

Low back pain is still an emerging topic in scientific study as well as in popular discussion as 80 percent of population suffer from first attack of low back pain (Kim et al., 2011; Walker, 2000). A book written by Tanner (1987) stated that, the principle in a holistic therapy is treating a patient as a person rather than isolate non-specific low back pain as a specific problem. Instead of seeking a doctor, patients with non-specific low back pain will refer osteopath, chiropractor, physiotherapy, acupuncturist and other therapies to solve their problem in a holistic way. Thus, many patients nowadays seek for alternative rather than rely on hospital treatment in order for them to recover. Hence, it is important to find out the effective treatment for non-specific low back pain as it can help the patient to reduce pain and restore functional mobility as fast as possible.

Instead of medication and surgery, patients with non-specific low back pain will prefer complementary or conservative treatment because both treatments are natural healing with safe way. Cupping therapy has gained popularity in sports setting as noted from London, 2012 and Rio Olympics, 2016 games where high-profile athletes were seen with cupping marks on their bodies which indirectly attracted crowd attention to know more about cupping. Thus, athletes are suggested to do cupping in order to boost their achievements in sport performance (Murray & Clarkson, 2019). During sport activity, cupping therapy promotes physiological changes with improved blood circulation, thus increase oxygen intake by hemoglobin transportation. It may consequently increase physical performance of athletes (Qureshi et al., 2017).



In Saudi Arabia, after spiritual healing and herbal medicine, cupping therapy is the third most common traditional practice (AlBedah et al., 2015). The World Health Organization in 2019 stated that in 2017, more than 400 cupping practitioners were registered, and more than 20 cupping clinics were licensed in Saudi Arabia (WHO Global Report on Traditional and Complementary Medicine, 2019).

Since 1950, researchers in Chinese hospital collaborated with researchers in Russian declared that cupping therapy as a treatment for the benefit in health care settings (Gao, 2004). In addition, a few of European countries change their perceptions by integrating complementary medicine within their conventional healthcare system. The cupping therapy is noted to be a common treatment practise in the Middle East, Europe and Asia, where Malaysia is included (Michalsen et al., 2009; Winkelstein et al., 2002). The World Health Organization in 2019 stated that Brunei, Malaysia and Singapore have listed cupping therapy under its list of services in Traditional and Chinese Medicine category, however, its' usage frequency is not known. In term types of cupping, previously, Far East countries such as Brunei, Malaysia, Cambodia and Bangladesh practice more on dry cupping whereas Middle East and Eastern European nations prefer to do wet cupping (Hanan & Eman, 2013).

In Bahrain, traditional medicine is usually delivered by a traditional masseur. Besides of treating patients with massage therapy using traditional oils and herbs, they also provide cupping and cauterization (placement of a hot metal or iron rod over region of pain or disease after being heated over hot charcoal) in order to relieve the physical pain of patients with non-specific low back pain. The physiotherapists in Bahrain reported that some patients are likely to use these methods and give feedback on their success or





failure in managing their low back pain symptoms during physiotherapy consultations (Maki et al., 2015). Same goes to patients with non-specific low back pain in Malaysia who will try complementary treatment such as dry cupping after facing unsuccessful recovery from hospital treatments or patients who want to avoid surgical procedure.

Dry cupping which is known as complementary treatment is applicable to reduce pain whereas hot pack generally has been used by physiotherapist as conservatively. Moreover, both treatments either conservative or complementary have advantages of being portable, effective, inexpensive, safe, and essentially free of side effects. Both treatments have a bit similar physiological changes which increase blood circulation by vasodilation of capillaries (Guild, 2012; Smalls, 2016).



In term of conservative treatment, physiotherapist will use therapeutic modalities which have been categorized either physical agent or electrotherapeutic for pain management and improve functional ability. The researcher chooses hot pack for representing physiotherapy treatment because it is being used frequently in physiotherapy setting. The frequency in usage of hot pack is proven by several studies. There was a study by Chipchase et al. (2009) who identified current availability and preferable electrophysical agents among Australian physiotherapists; and frequency of using that electromodalities. There was 70 percent of respondents who were practising physiotherapy had chosen to use ultrasound, cold packs/ice, heat packs, electrical stimulation for sensory stimulation; and interferential therapy within their treatments. This study also concluded that 20 percent of physiotherapists favor to use nine modalities on daily treatment consisted of ultrasound, hot pack, ice/cold packs, inferential therapy and electrical stimulation for sensory and motor stimulation,



electromyographic biofeedback and laser. In addition, ice pack, hot pack and portable electrical stimulation devices are recommended to patients as it is portable and easily obtained by their own.

This was supported by Robertson and Spurrit (1998) who did an investigation then found that hot pack was the second prior usage and available in electrophysical agent. There was some surveyed being done and found that hot pack was available in 141 out of 160 physiotherapy facilities which account to 88 percent. There were 73 percent of patients who used hot pack at least daily because of superficial heating, pain management and muscle relaxation effect. Most of physiotherapists choose hot pack because it is easy to apply. Therefore, as stated above, the researcher chooses hot pack for representing conservative treatment to reduce non-specific low back pain as the patients can procure by their own and it is suggested.

Therefore, the researcher wants to suggest the best treatment for adult's patients with non-specific low back pain to recover from pain and improving quality of life by reducing functional disability. The finding of effective treatment either dry cupping therapy or hot pack may be helpful for patients who suffered non-specific low back pain. Thus, patients have more choices to treat their non-specific low back pain. This finding not only useful for adult's patients, but for all populations.



## 1.4 Research Objectives

The objectives of study are as below:

- 1) To compare the effect of Dry Cupping Group, Hot Pack Group and Control Group in pain relief among adult patients with non-specific low back pain.
- 2) To compare the effect of Dry Cupping Group, Hot Pack Group and Control Group in reducing functional disability among adult patients with non-specific low back pain.

## 1.5 Research Hypothesis

- H<sub>A1</sub>: There is significant difference on pain relief before and after applying Dry Cupping, Hot Pack and no intervention in three weeks for patients with non-specific low back pain.
- H<sub>A2</sub>: There is significant difference on functional disability before and after applying Dry Cupping, Hot Pack and no intervention in three weeks for patients with non-specific low back pain.
- H<sub>A3</sub>: There is significant difference on pain relief after three weeks between Dry Cupping and Hot Pack for patients with non-specific low back pain.
- H<sub>A4</sub>: There is significant difference on pain relief after three weeks between Hot Pack and Control Group for patients with non-specific low back pain.
- H<sub>A5</sub>: There is significant difference on pain relief after three weeks between Dry Cupping and Control Group for patients with non-specific low back pain.
- H<sub>A6</sub>: There is significant difference on reducing functional disability after three weeks

between Dry Cupping and Hot Pack for patients with non-specific low back pain.

H<sub>A</sub>7: There is significant difference on reducing functional disability after three weeks between Dry Cupping and Control Group for patients with non-specific low back pain.

H<sub>A</sub>8: There is significant difference on reducing functional disability after three weeks between Hot Pack and Control Group for patients with non-specific low back pain.

## 1.6 Limitation

The limitation in a study referred to any potential weakness that are usually out of the researcher's control. This restriction is closely associated with the chosen research design, statistical model constraints, funding constraints, or other factors. Therefore, it needs to be acknowledged clearly in the study because limitation may affect study design, results and conclusions (Theofanidis & Fountouki, 2019).

There are two limitations in this study. Firstly, generalization of body functioning is different among subjects. Secondly, this study used self-report measures which is Numerical Pain Rating Scale (NPRS) because pain intensity cannot be measured by a tool or equipment. Pain perception varies between individuals. Thus, subjects may report level of pain according to their own feeling.

## 1.7 Delimitation

Delimitation referred to researcher who set boundaries or limits of study so that the aims and objectives become possible to achieve. In this respect, it can be argued that delimitations are in researcher's control. It may relate to study's theoretical background, objectives, research questions, variables under study and study sample (Theofanidis & Fountouki, 2019).

There are mainly three types of cupping in complementary treatment consist of moving cupping, wet cupping and dry cupping. In this study, the researcher chose dry cupping for treating patients with non-specific low back pain. For conventional treatment, there are various types of electromodalities either physical agent or electrotherapeutic in physiotherapy treatment. The researcher chose hot pack for treating patients with non-specific low back pain. Thus, dry cupping and hot pack were selected in this study to compare their effectiveness in pain relief for patients with non-specific low back pain. This is because many previous studies reported their effectiveness in pain relief and reduce functional disability for patients with non-specific low back pain. However, both complementary and conventional treatments were not being compared for their effectiveness in pain relief for patients with non-specific low back pain. Therefore, this study only delimited to compare the effectiveness of pain relief for patients with non-specific low back pain between dry cupping and hot pack.

## **1.8 Operational Definition**

### **1.8.1 Adult**

A person who is fully grown or developed with maturity age of 18 years and above. The personalities are independent, self-sufficient, and responsible to their own action and behavior.

### **1.8.2 Dry Cupping**

Cupping is the sucking method which been used part for many different indications among Arabian, Chinese and European traditional medicine systems. For dry cupping, cupping with four glasses is applied to skin around 15 minutes on low back area of patient. Because of vacuum, the skin is sucked into cupping glass, becomes red and warm, and when the vacuum is strong, there is sign of intracutaneous bleeding over affected skin area (petechiae). Then, all of cups were removed from affected area of skin (Emerich et al., 2014).

### **1.8.3 Hot Pack**

The moist hot pack is a choice of treatment of heat therapy. Superficial heat in moist heat pack directly transfers conduction energy to patient's skin by penetrating underlying tissue layer. Conduction can be defined as direct transfer of energy between

two objects in physical contact with each other. This energy flow in form of heat will transfer high temperature of hot pack to lower temperature of low back skin area (Prentice, 2012). The direct contact takes place between heat source and target tissues, which cause blood vessels in low back area to dilate and enhance perfusion to targeted tissue. Thus, hot packs are used most often to reduce pain and superficial muscle spasm, and to improve tissue extensibility. The pack consists of a canvas or nylon case filled with a hydrophilic silicate or other hydrophilic substance, or with sand. The packs are stored in a hot water unit at a temperature ranging from 70 to 77C (158 to 170F). When removed from water, hot pack will be executed by applying six or more layers of towels to low back area for 20 minutes until the area is suitably hot, as reported by patient (Poitras & Brosseau, 2008).

#### **1.8.4 Functional Ability**

Functional ability will be referred to actual potential capacity of individual with non-specific low back pain to perform activities and tasks of daily living that can be normally predicted. Functional ability is the key factor which related to physical and mental health in order to determine individual's quality of life and activity of daily living (ADL). The function blended with biological, psychological, and social domains. These domains are essential to measure long-term care in functional ability of an individual.

### 1.8.5 Functional Disability

In context of this study which measure the changes of functional disability on non-specific low back pain, conceptual definition of disability is referred to restriction of functional ability or lack of ability to perform daily activities basis in manner or within normal range of motion for a human being. There are different terminology to describe disability such as functional limitation, impairment, handicap, sometimes interchangeably and sometimes used differently (Duarte et al., 2012). These disabilities make patients with non-specific low back pain became incompetence to manage their daily physical activities independently in response to injury over low back area (Duarte et al., 2012).

### 1.8.6 Oswestry Disability Index (ODI)

There are ten activities and tasks that being assessed in this study by using Oswestry Disability Index (ODI) questionnaires in order to identify deterioration of physical functions among patients with non-specific low back pain. The tasks are including pain intensity, personal care, lifting, sleeping, walking, sitting, standing, sex life, social life and travelling. These activities and tasks cover the other independent living skills, such as nature of work, shopping and housework.

### 1.8.7 Pain

Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage (International Association for The Study of The Pain). Pain is never neutral because there is different express from different individual. Pain characterized by individual such as pain alarmed the damage or loss part of body whereas pain is part of body systems which protect the body from any further injury (Engel, 1999). Pain inhibits task of daily activity of an individual. It may be remained in prolong hour or aggravate in a duration of present of pain either short term or long term duration of time.

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### 1.8.8 Numerical Pain Rating Scale (NPRS)

There are many pain measurements can be used such as Visual Analogue Scale (VAS), Verbal Rating Scale (VRS) and Numerical Rating Scale (NRS). For NRS, it is also called as Numerical Rating Scale–11 (NRS-11) because of score on 11 point of pain intensity from 0-to-10 (Castarlenas et al., 2017). NRS also can be referred as Numerical Pain Rating Scale (NPRS) (Spadoni et al., 2004). This study used the term NPRS as pain measurement used verbal administration. NPRS helps to determine the difference of severity on non-specific low back pain between pre-intervention and post-intervention. NPRS also is used to identify an accurate diagnosis, determine a treatment plan and evaluate the effectiveness of treatment on non-specific low back area within this study.

### 1.8.9 Non-specific Low Back Pain

Non-specific low back pain can be defined as a condition of low back pain with no specific pathology or red flags such as herniated disc, spine deformity and radicular syndrome. Non-specific low back pain is categorized into acute, subacute and chronic. In this study, the subjects are categorized in chronic stage that suffer from non-specific low back pain in 12 weeks or more. Chronic back pain is more difficult problem, which often has strong psychological overlay such as work dissatisfaction, boredom, and a generous compensation system contribute to it (Ehlirch, 2003). These factors may cause recurrence low back pain as it may trigger pain and consequent pain subside, repetitively.

### 1.9 Summary

As discussed in this chapter, non-specific low back pain has suppressed the performance of patients in daily living lifestyle. Furthermore, many patients are seeking alternative instead of undergo hospital treatment such as medication and surgical after there is no showing effectiveness or need to queue in long duration to get turn of treatment. Thus, patients will look for conservative treatment by physiotherapy treatment or other alternatives which is more holistic. In order to cut the cost of treatment, this study want to help the adult's patients to determine either physiotherapy treatment which is hot pack or complementary treatment which is dry cupping is helpful to reduce pain intensity and functional disability.