

CHAPTER 1

INTRODUCTION

1. Rationale

Weightlifting is a sport in which athletes attempt to lift the maximum weight (1). It demands high levels of muscle power and strength of musculoskeletal system (1, 2). During lifts in the sport of weightlifting, the weightlifter is exposed to repetitive and high loads that exceed body weight by as much as two to three times in some weight categories (3). Three anatomical areas that can be at the high risk of injury for elite Olympic weightlifters are knee, low back and shoulder (4). In Thai national weightlifters, the most common injuries are also the knee and lower back areas (5). The load that use in weightlifting may put the knee at risk of injury (4). Anterior knee pain is the majority of knee problems in Thai national weightlifters with incidence of approximately 39.47% (5). It includes patellar tendinopathy (jumper's knee), patellofemoral syndrome, fat pad syndrome, Osgood-Schlatter syndrome, and Sinding-Larsen-Johansson syndrome. Another potential knee pain for Thai national weightlifters is iliotibial band syndrome (5). In many cases, these knee problems can result in a reduction of performance and a long interruption of training and competition. Moreover, the symptoms are often serious and recurring, resulting in chronic impairment of athletic ability, and the condition can severely limit or even end the athletic career (6-8).

There are numerous treatment methods for knee pain such as electrophysical therapeutic modalities, taping and bracing or icing (9-11). However, these passive treatment methods have limited potential in treatment of knee pain especially in

chronic case (9, 11-14). Modern concepts for management of musculoskeletal problems highlights that education and active self-management are crucial parts in rehabilitation of musculoskeletal pain (15-18).

Previous studies found that knee educational program could lead to improvement in pain and functional status, and reduce recurrence rate of symptoms in patient with osteoarthritis of knee (15, 18). The knee educational program is a school program for individuals with knee pain (15, 16, 18-20). It usually involves both theoretical and practical lessons, as well as exercises and training (15, 16, 20). Lessons are given to participants and are led by a physiotherapist or health professionals (15, 16, 20). It is designed to assist patients to effectively manage their condition, by teaching them how to cope with their symptoms, including the physical and psychosocial consequences of living with their conditions (15, 16, 18-20). There are various models of knee educational program for osteoarthritis have been employed (15, 20). However, the concepts of knee educational program are similar to that of the back school program (15, 16, 21). It includes education, self management and exercise programs (15, 16, 18, 20). The goals of the program are to reduce pain, improve physical function and increase general well-being (15, 16, 18, 20). A psychosocial theory approach is also adopted to improve self-efficacy and facilitate long-term change in behavior (15, 18). Participants are encouraged to include exercise and effective pain management as well as specific information learned during the sessions (15). However, previous studies have mainly investigated the effects of knee educational program in osteoarthritis knees (15, 16, 18). There have no research evidence to determine the effects of knee educational program for management of knee pain in athlete, especially in high risk population such as weightlifters. Whether

or not this developed knee educational program can help to relieve pain and improve functional status of the knee for Thai national weightlifters is awaiting for an evaluation. This study may be helpful in management program, and be part for excellence and success of Thai national weightlifters.

2. Purposes of the study and hypothesis

Purposes:

To evaluate the effects of knee educational program on knowledge of knee care, intensity of knee pain, pain-free knee extension strength, pain-free double legs and single leg strengths, knee functional ability, and quality of lifting in Thai national weightlifters.

Hypotheses:

The knee educational program will improve knowledge of knee care, intensity of knee pain, pain-free knee extension strength, pain-free double legs and single leg strengths, knee functional ability, and quality of lifting in Thai national weightlifters.

3. Advantages of the study

The result of this study may provide the potential knee educational program for Thai national weightlifters. It may be part for excellence and success of Thai national weightlifters. Moreover, the results may be able to apply to junior weightlifters and other athletes, who encounter with knee pain.