

The Propensity of Sports Coach in Implementing Sport Massage for Athletes Pre and Post Exercise

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Abstract-This study aims to determine the tendency of sports coach in applying sports massage to athletes. The method used is a survey and data collection techniques through questionnaire. The scores obtained were analyzed using quantitative descriptive analysis in the form of percentage. This study used a saturated sampling technique or in other words this study use all coaches and assistant coaches as the sample in the sport in the International Sports School East Kalimantan Province with a total of 32 coaches. This research was conducted in East Kalimantan Province. This study used an instrument in the form of a questionnaire to collect data. Data analysis technique in this study is descriptive statistical technique in the form of percentage. The result of this study; 1 coach or 3.1% is at very good category, 11 coaches or 34.4% are at good category, 7 coaches or 21.9% are acceptable category, 12 coaches or 3.11% are at poor category, and 1 coach or 3.11% is at very poor category. The conclusion of this research is that the level of propensity of sports coaches to implement sports massage for athletes pre and post training is included in poor category.

Keywords: *sport coache, sport massage, athletes*

I. INTRODUCTION

Massage techniques are very diverse but in general one attempts to create a comfortable state by pressing on certain body parts or on major muscle parts so it can release blood circulation and make the body feel good or recovered. Massage in fact has developed widely in community, with various methods that are more likely traditional and combined with a variety of techniques, commonly in a massage activity within the community along with rubbing techniques and the repositioning in certain joints. It aim to provide comfort and restore physical condition after activities.

Massage therapy is one of the oldest forms

of medication that is currently popular as part of a complementary and drug-free approach. (Zadkosh, SM, et al. (2015:321). According to Sulistyorini and Basoeki (2012:2), sports massage is a manipulation complex applied by using hands on body of athlete/sportsman or any healthy man in a passive state to foster the physical condition, avoid damaging things, and alleviate as much pain as possible caused by sports injuries. According (Joesoef Roepajadi, 2015: 1) sports massage can help blood circulation in muscles, smoothen organs, and regulate spleen flow. Massage is a treatment by pressing certain body parts or major muscle parts and restore the initial condition.

Massage has a variety of types and terms that are widely known by the public. Massage in nature has the same benefits and goals but different in terms of types. Massage is a form or method of handling using touch to relax muscles and provide comfort. Broadly speaking, massage can provide a special effect that makes the body feel lighter. It is believed because massage can help warm up muscles, reduce muscle pain, increase circulation, eliminate metabolic waste, and increase relaxation. (Henry Joseph, L., et al. 2018:2). Massage in sports activities has an important role in current sports activities whether in community or sports events.

There are several types of massage that develop and known by the public, both in general and in sports community. From several types of massage that develop in Indonesia and are widely known by the community include Swedish, acupressure, reflection, shiatsu, tsubo, thai massage, and segment massage (Harsanti, S. & A. S. Graha. 2014:2). Also, there is specified massage in sports which is sports massage targeted to healthy athletes.

There are two types of massage and those are almost the same in terms of objectives, the technique is sports massage and Swedish massage. Swedish massage is a manipulation of body tissue with special technique to shorten recovery time from muscle tension (fatigue), increase blood circulation without increasing heart's workload. Sport Massage is a

massage therapy that stimulates blood circulation and lymph gland. (Saputro, Y. A. 2017:501).

Massage performed by therapist can provide special effects that soothe individual and even triggers addiction to receive another massage services. It is influenced by several factors including psychological factors in which someone feels comfortable, calmer and erase tiredness, fatigue and lethargy instantly. Massage effects tend to be more psychological than physiological (Lee, E. J., et al. 2019:9). In other words, it leads to the feeling factor and tendency to do massage is more likely due to regular use of service and in some occasion must be performed by the same therapist. Clearly, this is the influence of psychological factors or habits and feelings. It also turns out to have a positive effect on the purpose of massage in general.

Special handling through massage techniques has become more common especially in sports. Athletes are certainly no stranger to massage because it can provide benefits that are experienced by individuals related to body health, feelings and of course the prevention and rehabilitation of injuries. As written by Poppendieck, W (2016:184), massage is a mechanical manipulation through rhythmic pressure and movement of body tissues, which is beneficial for improving health as an effort to recover and prepare before training as well as prevention and rehabilitation of injuries.

Massaging athlete is part of a treatment for physical condition and fitness to overcome the next activities. Massage to athletes is usually administered after undergoing training sessions with recovery intention. According to Kargarfard, M (2015:259) administering massage to athletes will have a positive effect after exercise because it can provide an increase to the performance during training and increase the level of recovery after physical activity or during intensive training. Occasionally, the combination of handling can be positively correlated such as the use of tools providing vibrations throughout the body that also have the effect of reducing muscle pain and increasing performance in sports. (Kosar, A. C. 2012:2910).

The purpose and benefits of massage in general can be administered to individual who has vigorous physical activity that may cause fatigue and muscle discomfort. Moreover, this can be performed on athletes who have intensive training. Athletes often experience various incidents commonly referred to as sports injuries. For instance, in the muscles known as strains often affected due to sports activities.

Muscle damage due to sports training is often experienced by athletes usually during training. Shin, M.- S. (2015:2259) explains massage for muscle damage due to exercise can increase proprioceptive accuracy and muscle strength because of changes in the superficial layer of gastrocnemius. Based on these result, it is recommended that massage

can be a useful treatment for muscle damage occurring post exercise.

Massage techniques in application have a variety of terms and objectives, in sports is better known as sports massage. Sport massage is a massage specifically performed or administered to healthy individual, especially athletes. Sport massage can produce several hormones such as, endorphins, adrenaline, and thyroxine (Prastowo, K., & Arovah, N. I. 2014:6).

In general, public perceptions of sports massage is a form of activity that involves massage techniques performed on healthy condition body and is usually more commonly conducted in sports milieu but does not exclude the possibility of performing massage to public, considering the sport massage is a treatment that can be administered to every individual.

The physiological effects of sports massage are: (1) sports massage helps reduce pain. (2) sport massage helps muscle relaxation. The psychological effects of sports massage include: (1) Reducing stress levels, because it soothes muscles and nerves. (2) Stimulating pleasure and comfort. The effects of sport massage are experienced on blood circulation, lymph, skin, muscles, and nerves. The sport massage is given after a long period of competition or activities with the intention of relaxing muscles and joints that previously work vigorously. Basically, sport massage is targeted at athletes, whether amateur or professional, but this massage can also be applied to public or non-athletes who have intense activities.

Sport massage is a form of treatment for certain purposes. Sport massage is applied to individual or in this case athlete with healthy condition. Sports massage is a form of massage and manipulation of soft tissue and provides benefits to individual who has performed certain physical activities. (Norah, J.P., & Trever, J.P. 2015:10). Thus, massage technique is administered to someone who experiences several conditions including fatigue post exercise. In general, sport massage is a form of treatment that is often performed on individual who has consistent physical activity, especially athletes.

Public perceives sport massage as a form of massage that is usually performed to deal with particular symptoms caused by physical activity or sports activities. Sport massage has almost the same benefits as other massages, which prioritizes treatment and body fitness or restores the initial condition. In other terms, massage directly gives a special effect on the body, such as comfort and freshness to take another physical activities. Massage can stimulate relaxation, provide comfort, and improve performance. (Koren, Y., & Kalichman, L. 2018:3).

Particularly, there are various sports massage techniques and it is a form of manipulation of other massage techniques in sport massage, such as *efflurage*, *petrisage*, *shaking*, *tapotemen*, *friction*,

walken, skin rolling, and vibration. From the various terms of techniques in sports massage, those connect one to another, thus, the application is not only a massage but also the technique that provides benefits and gives a positive value to sports massage to be more considered by the public. From the aforementioned techniques, administering massage through sport massage techniques will certainly provide benefits in particular, whether before or after training. Also, it has the benefit of providing athletes with freshness to seize their goals, reducing muscle tension, restoring the level of fatigue, and minimizing the risk of injury (Ajib, A. 2009:12).

Readiness of athletes to training and the match is the key to success. Readiness, in particular, is state of no injury. Through sports massage, it is expected to provide readiness to encounter any unexpected event. In addition, sport massage can provide a calming effect through touch that relaxes the body with certain techniques so it smoothens blood circulation and the body becomes fit and fresh to join other activities such as training and competition.

The sport massage should be ideally administered when the athletes are in break phase from the weekly training program or it can be performed on weekends during recess once a week. This is expected to have a positive impact on athletes. Based on the explanation, coached should give an encouragement to athletes to focus on their physical condition so coaches who have special abilities in sport massage can directly handle the situation. Otherwise, for coaches who have no expertise in massage should contact trusted massage experts and have certified ability.

The coaches are important component that controls the success of the training program. A neatly programmed training will yield good results including the prevention and treatment of sports injuries. Coaches should possess this ability to equip themselves in emergency situation that requires immediate treatment. Athletes usually also have a psychological closeness with the coach so that they will be more open to their conditions and receive handling process as an anticipation and prevention of injury in appropriate and effective manner.

The tendency of coaches to understand sport massage in its application to athletes will synergize, be always intertwined and lead to a positive habit that can affect the preparedness and effectiveness in a training and competition. Sport massage to athletes is an effort of anticipation and handling to calm the body after physical activities, so handling form and time must be noticed by coaches to give an optimum results.

Various sports branches or with special differences in training and preparation will deal with different sport massage, whether in frequency, handling techniques, and duration. For instance, sports with high intensity of competition such as

martial arts can compete more than once in one day. So, the preparation and application of sport massage in martial arts should be calculated and adjusted to the conditions and needs of athletes.

Sports that tend to have not too dominant physical activity, such as archery, shooting, etc., do not exclude the the possibility of massage. These sports in practice require high concentration and accuracy. High concentration will eventually trigger tension in certain parts of the muscle and cause uncomfortable feeling in certain part of the body. Massage through the sport massage approach will provide a comfortable effect and increase the freshness of the body, also increase blood circulation so the athletes are ready to compete in another activities.

Massage gives a positive impact because muscle damage caused by exercise may induce muscle pain (Ebert, 2018:11), the level of physical activity can decrease with age (Moreno, 2019:1). In sports, massage therapy is often used to recover the physical conditions after exercise and to reduce pain and prevent muscle pain. (Bender, 2019:1).

Massage can provide analgesic effects on muscles by using a pain inhibitory system on the muscles. (Casanova, 2017:7). Massage can increase stretching of tendons and connective tissue and cause relieving muscle tension, accelerating blood circulation, and speeding up muscle recovery. (Rasooli, S. A. (2012:123).

Massage therapy is a therapy that uses physical manipulation with various techniques in soft tissues of the body (Arovah, 2010:116). Massage therapy is an attempt to cure an illness or restore patient's condition after experiencing certain disorders using various manipulations. As affirmed by Sadeghi & Nariman (2014:132) that therapy massage with various types such as reflexology, Russian massage, shiatsu, swedish and other types have different effects and can be used in different diseases according to the disease and patient care plan.

Massage therapy is a form of treatment that is usually given through direct hand touch and is high demand therapy by various groups. With the benefits and effects of comfort it gives, massage is believed to be able to maintain and improve individual's health and fitness. Staveski, SL (2018:726) defines massage therapy as direct manual manipulation using hand administered on various soft tissues in body or muscles, through direct and systematic movements and touches of the hands to improve the healthiness.

Massage can also alleviate pain on chronic pain based on research, from lower back pain to labor pain, migraine headaches, pre-menstrual syndrome, and chronic fatigue (Field, T. 2014:2). Giving massage therapy is also recommended for cancer sufferers and must be performed by professionals of therapy, treatment programs that support patients with unusual and uncontrolled levels of anxiety or

pain (Deng, G. E. 2013:431). Massage therapy can also be an effective treatment method in various health treatments in form of discomfort. (Navaee, M: 2020:2).

Massage is a complementary or alternative medicine that is commonly used to deal with pain or discomfort in certain body parts, usually due to muscle tension resulting from previous physical activities. Laosee. (2020:1) explains that patients with chronic back pain will experience decreased pain and increased spinal flexibility. Based on this explanation, it is obvious that massage provides good benefits to improve health and reduce pain in some cases. Massage can also bring happy effect, calm anxiety and provide benefits to the quality of life. (Massingill, J. 2018:7).

Massage certainly has a variety of purposes. It is important to understand that the effectiveness of massage in addition to pain in fibromyalgia or pain all over the body. The effectiveness of massage can be observed from fatigue, stiffness, anxiety, depression, sleep quality, and quality of life (Yuan, S. L. K., 2015:262). Massage has very good benefits for human body, as important note, it is performed by professionals and following the requirements of each individual. For athletes who prepare with a routine training program, this will bring positive benefits. With the expectation that athletes will get fit or prepare to join training and match.

The application of sport massage in preparation for match and after match is a remarkable strategy to provide physical readiness for athletes. The sports coach in this case is intended to be able to provide an encouragement for athletes to be open and aware of the need for massage to maintain their physical fitness. Besides, it is considered important to have the specialty in massage techniques for coaches so they can involve in emergency conditions, such as during matches and in events where athletes are uncomfortable with others. So, the coach must be more active in providing feedback on this state to provide and identify aspects of massage needs for athletes.

The movements in sport massage are vary according to the sequence and purpose and will freshen and lighten body because it smoothens blood circulation. Efflurage or rubbing techniques are usually performed at the beginning and end session of massage. This technique can be combined with other techniques such as grinding, squeezing and slapping, to calm muscles and improve blood circulation.

Manipulation of movement techniques in sports massage for various purposes will provide relaxation to the muscles after physical activities. The form of handling in sport massage emphasizes hand use or other body of the masseur. But often found a massage expert using special tools to help massage. This has the same purpose and objective, which aids muscle relaxation and increases range of motion and muscle performance (Bradbury-Squires et al.,

2015:133).

An athlete is a sportsman with a high level activities based on the exercise program he has. So, muscle fatigue often occurs. Muscle fatigue can occur after exercise and is even more dangerous if it occurs during a match. Muscle fatigue can be identified when it is muscle spasms, which is caused by the blocked process of lactic acid resistancy to become ATP in the muscles (Sukadiyanto & Muluk, 2011:38).

The process of training or competition is very important for athletes to pay attention to the physical condition, particularly the level of muscle fatigue since sports massage before the competition can make a contribution or additional in physical warming (Arabaci, 2008, p. 549). It is also important that the coaches should understand various forms of treatment to anticipate or handle injuries happening to athletes such as sports massage, which can directly function to prevent injury. A masseur is not merely required to provide light handling when doing exercise and after exercise for athletes.

Tendency of muscle fatigue for athletes can bring fatal effects such as joint injuries and what may often occur is ankle injury, when it happens it will greatly disrupt ankle joint mobility (Škarabot, Beardsley, & Štirn, 2015:205). Thus, through techniques including massage can be used to improve muscle recovery after exercise (Best, Hunter, Wilcox, & Haq, 2008:446).

The coach is an important part of sport training to achieve optimal results. Person in charge and is needed in every part. The tendency of the coaches in implementing the handling and prevention of sports injuries through sport massage techniques is the main goal of this research, so it is expected that the results can provide encouragement for coaches to be more active and responsive to such an event in training and competitions.

The sports branch in East Kalimantan Province, which ever became the host of the 2008 National Sports Week, marked many things starting from the assets of nice building and athletes coming from East Kalimantan Province that cannot be underestimated. In every National Sports Week East Kalimantan always occupies a good position. The position of East Kalimantan during the last National Sports Week was the third and in National Sports Week West Java, East Kalimantan has positioned itself on top five and was under Central Java.

East Kalimantan Province has good athlete training. Starting from the Student Training Development Center or PPLP to the establishment of a special training namely the International Sports School or SKOI East Kalimantan. Both of them foster athletes who are still in junior and senior high school specifically for SKOI East Kalimantan, the training of athletes all through regional funding of the East Kalimantan Province but those have differences from the coaching program in which SKOI East

Kalimantan athletes are given boarding, centralized training, and school in the same location.

The training of athletes in East Kalimantan certainly becomes the foundation for the progress of the achievements of East Kalimantan athletes in national and international events. In this problem, the coaches who have direct control over the implementation of training and competition must be active and have a positive tendency or perception of the handling and prevention of sports injuries through the approach of sports massage and the techniques containing. Coaches with special expertise are expected to provide a positive stimulus to the readiness of athletes in undergoing training and preparation for the match.

East Kalimantan is a province located on the island of Borneo. Based on the latest government decree stating that East Kalimantan will be made as the new capital of the State of Indonesia. Based on the plan, it certainly makes many development plans from various aspects, and certainly sports, not exception, will gradually be developed into a sports center, because if new capital plan will be proceeded then the government will move as a whole in East Kalimantan Province. So, it will have an impact on the progress and development of aspects of sports.

Responding to this is certainly not limited to the development solely. Policy stakeholders should think about the direction of sports development, one of which is the development of supporting aspects such as sports massages which support the implementation of training programs and preparation for competition. Sport massage in this study is the main topic that will be examined in its application in the process of training and after sports training, through the point of view of a sports coach from each of the branches.

The tendency of the coaches to implement some anticipatory measures to minimize the risk of injury is certainly something that must be considered. Based on the theory and preliminary study, this research will focus on the level of the tendency of sports coaches in applying sports massage techniques in before and after training for athletes in East Kalimantan Province.

II. METHODS

This research is a quantitative descriptive study that aims to determine the tendency of sports coaches in the application of sports massage to athletes. The method used is a survey, data collection techniques using a questionnaire, and the scores obtained were analyzed using quantitative descriptive analysis in the form of a percentage.

This study used saturated sampling technique, which all members of the population are used as a sample (Sugiyono, 2015:124), or in other words this research is a population research with the sample of all coaches and assistant coaches in sports specifically International Sports School East

Kalimantan Province with a total of 32 coaches of sports in the International Sports School.

This research was conducted in East Kalimantan Province. This study used an instrument in the form of a questionnaire to collect data. Data analysis techniques in this study used descriptive statistical techniques in the form of percentage.

III. RESULTS AND DISCUSSION

The results of the study used questionnaire related to the tendency of sports coaches in the application of sports massage to athletes before and after exercises will be explained in the table below.

Table 1. Calculation of Coach Tendency in Implementing Sport Massage for Athletes

No	Percentage	Total	Category
1	3.1	1	Very Good
2	34.4	11	Good
3	21.9	7	Acceptable
4	37.5	12	Poor
5	3.11	1	Very Poor
Σ	100	32	

From the results of the calculation, 1 coach or 3.1% is at very good category, 11 coaches or 34.4% are at good category, 7 coaches or 21.9% are acceptable category, 12 coaches or 37.5% are at poor category, and 1 coach or 3.11% is at very poor category. Based on the results of research and the calculation conducted, it can be explained the level of tendency of coaches in applying sports massage to athletes before and after exercises is included in poor category with 12 coaches or 37.5%. Furthermore, this will be explained through histogram or bar chart.

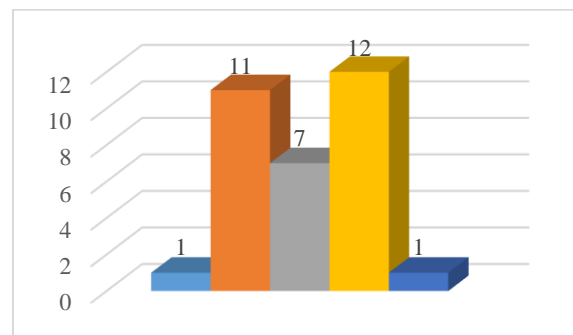


Figure 1. Diagram of the level of coach tendency in implementing sport massage for athletes

In-depth discussion in this research is that the results obtained indicate the tendency of sport coaches in East Kalimantan to be included in poor category. These results indicate that coaches in some sports training such as at International Sports School East Kalimantan have less tendencies and enthusiasm regarding the form of sports massage activities.

The coach has concern for the physical condition of the athletes in general. But specifically in the prevention and anticipation of the risk of injury

using sports massage still tends to be lacking. Coaches consider massage to be a form of treatment for injury, but in reality sports massage is different from the type of injury massage, sports massage tends to be a technique used for fitness purposes or to restore physical condition, both as a form of treatment after and before exercise.

The tendency of sports coaches to pay attention to the needs of athletes basically has high attention, in the training process, especially in the prevention and treatment of sports injuries, the coaches are very enthusiastic and responsive to this but various forms of the latest handling are sometimes neglected, so sports massage with its main objectives have less attention and even in its application is used as a form of handling injury or recovery of physical condition after training. Then, the purpose of sports massage as a form of anticipation or preparation before training and before competition is sometimes rarely considered by coaches in sports.

Based on the results of the research that has been described previously, it gives a variety of images and prejudices. the seriousness of the coaches to answer the questionnaire has become important note. This study utilized Google form as a means of administering questionnaires to the coaches so that the questionnaire process cannot be controlled optimally.

The results of the research explain need to be highlighted for further research and it is considered important to conduct an in-depth study related to sports massage and its application to prepare athlete for competition and even during training. Thus, the role of sport massage is expected to unravel more issue in benefits and objectives and is expected to provide an in-depth picture related to the exact time of providing sport massage for athletes in duration and frequency.

IV. CONCLUSION

The conclusion of this research is the level of tendency of coaches in general in East Kalimantan Province specifically in International Sports School towards the application of sport massage for athletes before and after training is in poor category. This is limited to the application of sport massage in context of preparation and prevention of sports injuri risks.

ACKNOWLEDGMENTS

This research is greatly attached to the participation and support of various parties, materially and spiritually. Special acknowledgement to Allah who has given chances and opportunity during the research process, families who always prayer and support researchers, colleagues cannot be mentioned who have helped the researchers to conduct this study well. Furthermore, thanks to various parties from sports coaching in East Kalimantan province who have provided the opportunity and permission to conduct research so

that the process of research and data collection can be conducted optimally.

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