Physical Components Analysis on Sportfishing as A Maritime Community Culture

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Abstract. Sportfishing is an activity that is often carried out by people in maritime areas. Even though it is called Sportfishing, the physical components used in this activity need to be studied in depth. This research aimed to analyze the physical components found in Sportfishing which is part of the culture of maritime society. This research was a descriptive research. Data was collected through literature review and documentation in the form of videos showing the sport of fishing. The research results show that in Sportfishing there are several physical components used including strength, balance, reaction, endurance and explosive power. These physical components can be trained through physical education lessons at school with a variety of materials. Especially in the maritime area, this material can be related to Sportfishing where the physical components trained will be useful for students in carrying out Sportfishing activities.

1 Introduction

Fishing can be said to be an activity of catching fish using a tool which is usually called a fishing rod and the majority of 79% of all fishing activities occur in salt water followed by land waters [1]. Fishing is also a popular activity in marine ecosystems around the world using a variety of equipment such as fishing rods, bows, spears, nets and traps [2]. Fishing can be considered a hobby or activity on the edge or in the middle of lakes, seas and rivers with the target of getting prey, namely fish. In developing countries such as western and eastern Indonesian waters, this is an area of Indonesia that is famous for its fishing tourism potential [3]. In fact, many people consider sportfishing as an alternative livelihood [4]. Fishing is generally done for two main purposes, namely catching fish and recreation. Most anglers carry out this activity to achieve these two goals [5]. So apart from relieving fatigue, bringing home the caught fish and giving satisfaction to almost all anglers and sportfishing is also considered a sustainable recreational activity and is an engine that contributes to the development of the tourism sector [6]. However, now an interesting phenomenon has emerged among anglers, namely the practice of catch and release. Catch-release is a practice where anglers release back the fish they catch for conservation reasons. It is hoped that the fish that are released again can continue to live so that they do not

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reduce the fish population and disrupt the balance of the ecosystem. The practice of catch and release is closely related to what is called Sportfishing.

Sportfishing at the global level has become an important reference because it is estimated that 220 million anglers spend up to 190 billion dollars per year because sportfishing activities are starting to be popular with everyone. [7]. This is one of the main differences between sportfishing and conventional fishing techniques. This process orientation is also what makes sportfishing important in relation to catch-and-release practices. There are also differences in loose catch, depending on the target fish you want to catch. If the target fish is bigger, additional costs will be needed to adjust the fishing equipment. Sportfishing practitioners will focus more on their fishing activities as a means of showing masculinity rather than bringing home the fish they catch [8].

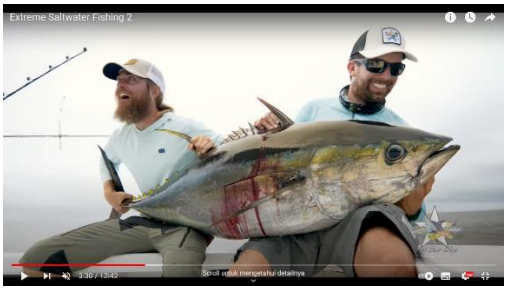
The definition of fishing as a sporting activity is more precisely not intended for fishermen, but people who enjoy fishing activities that involve many things to have fun outdoors. Besides having fun, there may be additional benefits to exercise. Therefore, now fishing is also said to be a sport called Sportfishing. This means that Sportfishing focuses on the physical activity obtained when the fish strikes or the bait is eaten [9]. The main goal of Sportfishing is exercise, not catching as many fish as possible, as fishermen do. This activity is very popular in various circles of Indonesian society. Everyone in all ages and any gender loves fishing activities. In fact, many tournaments have been held which require quite large funds [10].

Many experts say that the factor in fishing is technique. An angler must master fishing techniques. There are also many types of fishing techniques. Starting from placing bait, throwing the fishing rod, and pulling the fishing rod when it is struck by a fish. This makes ordinary people who have just started fishing only know that to become a reliable angler, you only need to master fishing techniques. However, in Sportfishing, it is not just the dominant technique that must be mastered, but there are physical components that must be mastered and improved. For this reason, if someone wants to get involved in the sport of fishing, they need to understand the physical components used when fishing in order to avoid injuries such as slipping while fishing, muscle cramps due to prey that is larger than their body size [11].

2 Research Method

This was a descriptive research. Literature review and documentation were used for collecting data. Document that is analyzed was the video related to Sportfishing. The source of video was from The channel Sportfishing Television and BlacktipH on Youtube.

Picture 1. Sportfishing Television



Picture 2. BlacktipH

The physical Components that were anylized from video are presented in Table 1 below.

Table 1. Physical Components in Sportfishing

No.	Indicators
1	Strength
2	Balance
3	Reaction
4	Power
5	Endurance

3 Result and Discussion

The result will be divided into several parts based on the physical components.

3.1 Arm Muscle Strength

Strength is one of the elements that an athlete must have, because every performance in sport always requires strength[12]. Strength is an element that is really needed when someone does sports activities, because strength is one of the driving force factors and prevents injury. Apart from that, strength has an important role in other components of physical abilities, for example power, agility, speed. Thus, strength is the main factor in creating optimal performance[13]. This is because strength is the driving force of every physical activity and prevents injury. Apart from that, strength also plays an important role in other components of physical ability. From this definition, arm muscle strength is a component of a physical condition where a person is able to use the arm muscles to exert maximum power to overcome resistance or load[14].

Sportfishing really requires arm muscle strength to attract catches. Therefore, in the sport of fishing, arm muscle strength plays a very important role when throwing the rod and pulling the rod when the bait is eaten by the fish. What's more, if the bait is a monster fish whose weight is almost the same as the weight of the angler. This will be very important for the catch because in Sportfishing, the angler is considered successful if the catch reaches land even though it will later be released back into the water. If the angler does not have enough muscle strength, what will happen is that the catch will come off along with the fishing rod, the angler can also experience arm muscle cramps, and the worst thing is that the angler can go into the water because he does not have the strength to pull the catch.

3.2 Body Balance

Balance is an important ability because it is used in daily activities, for example walking, running, most sports and games. Balance is a basic thing for humans to be able to live independently. Balance keeps a person's body from falling easily. Broadly speaking, balance can be interpreted as the ability to control the body's center of mass or center of gravity towards a point or plane of support, as well as the ability to stand up straight on two legs which is important in a person and as a precursor for the initiation of other activities of daily living[15].

Balance is assumed to be a group of reflexes that trigger balance centers found in the visual, vestibular and somatosensory systems. The Visual System or vision system is the main system involved in planning movements and avoiding obstacles along the way. The vestibular system can be thought of as a gyroscope that senses or influences linear and angular acceleration, while the somatosensory system is a system consisting of many sensors that sense the position and speed of all body segments, their contact (impact) with external objects (including the ground), and gravity orientation [16].

Balance involves various movements in each body segment supported by the musculoskeletal system and fulcrum. The ability to balance body mass with support will enable humans to carry out activities effectively and efficiently. Balance is a complex interaction and integration/interaction of sensory systems (vestibular, visual, and somatosensory including proprioceptors) and musculoskeletal (muscles, joints and other soft tissues) which are modified/regulated in the brain (motor control, sensory, basal ganglia, cerebellum, and association areas) in response to changes in external and internal conditions. It is also influenced by other factors such as age, motivation, cognition, environment, fatigue, influence of drugs and previous experiences [17].

Balance is the ability to maintain central projection of the body on a supporting platform both when standing, sitting, transiting and walking. Balance is needed to maintain position and stability when moving from one position to another. Balance is also the ability to react quickly and efficiently to maintain postural stability before, during and after movement and in responding to external disturbances. Balance is maintained by the dynamic integration of internal and external factors involving the environment [16].

There are two types of balance, namely static balance and dynamic balance. Static balance maintains a position that does not move or change while dynamic balance involves body control as the body moves in space (National Throws Coaches Association). An angler really needs to master balance, because in sportfishing many things happen, such as slipping which can even result in injury and worst of all, many anglers die because they slip. Even in Brazil, some deaths can occur during sportfishing, due to injuries sustained during fishing [18].

3.3 Body Reaction

Reaction speed in the body is a person's ability to respond to a stimulus or stimuli in the shortest time possible. Apart from that, reaction speed is divided into two, namely single reactions and compound reactions. Single reaction speed is a person's ability to respond to a known stimulus with a known direction and target in the shortest possible time. This means that before carrying out a movement in the athlete's mind there is already a perception and direction as well as the target of the motor plan that will be carried out. So that the stimulus conditions can be predicted before the movement is carried out[19]. Compound reaction speed is assumed to be the opposite of single reaction speed where a person is able to respond to stimuli or stimuli whose direction and target are unknown in the shortest possible time[20].

Reaction speed is a form of quality that allows a person to move as quickly as possible after receiving stimulation[14]. Reaction speed includes the time from the stimulus, for example when a gun is fired at the start of a sprint race until the first muscle contraction occurs. Likewise with Sportfishing, when the bait is eaten by the fish, of course as an angler you need good reaction speed. If the angler's reaction speed is not good, it will be difficult to distinguish whether the bait has been eaten by the fish or not. The specific determining factors for reaction speed are: depending on the nervous system, the ability to navigate the situation faced by the athlete, the sharpness of the five senses in receiving stimuli, speed of movement and muscle explosive power. So it can be concluded that reaction speed is an individual's ability to carry out movements from the start of the stimulus to the end of the response in the shortest possible time. Several steps that need to be taken in an effort to increase the development of reaction speed are increasing recognition of special perceptual situations and automating as much as possible the motor responses that need to be made or the kinetic attitudes that need to be chosen in real situations [21].

3.4 Explosive Power

Physical condition in exercise is one of the prerequisites that is very necessary in efforts to improve performance and also for physical fitness. Physical conditions are all physical abilities that determine achievement, the realization of which is carried out through personal abilities. Fishing is a sport that involves all parts of the body and requires physical components to be able to make explosive movements. In fact, what is needed in the sport of fishing is not just strength, but strength accompanied by an element of speed which is called explosive power [22].

The definition of explosive power is a combination or combination of strength and speed. So these two components need to be considered first in implementing a training program to build explosive power. The ability of muscles to withstand loads at high speed in each movement. Based on the description above, it can be concluded that explosive power is the ability of muscles to resist load/resistance at high speed in one movement, so that to be able to produce optimal explosive power a combination of strength and speed is required. When an angler gets a big catch, a lot of power is needed so that the catch can be felt and caught quickly [23].

To obtain good explosive power, other factors are needed besides strength and speed, namely the speed of nerve stimulation, the speed of muscle contractions which are coordinated in one complete unit so that it will produce high explosive power. Basically, explosive power can be developed and improved through training by emphasizing maximal muscle force exertion and the duration of contractions in the shortest possible time. With this training, explosive power can be increased and developed optimally. Based on this, in order to increase explosive power capabilities, it is necessary to provide movement training that focuses on elements of strength and elements of speed. When providing this movement training, of course it is adjusted to the characteristics of the sport [24].

3.5 Endurance

Endurance is a person's body's ability to carry out sports activities for a long period of time, but a person does not easily experience fatigue. Endurance is always related to the duration and intensity of work, so the more a person does sports activities for a long period of time, the more the intensity of the sports activities carried out is also high. In other words, a person can be said to have good immune system[25]. Endurance is the ability to carry out activities or sports activities for a long period of time without feeling significant fatigue. Endurance will be relatively better for those who have good physical fitness, which

means they have a body that is able to carry out activities continuously for quite a long time without experiencing significant fatigue and the body has reserve energy to carry out activities that are fast. [26].

Endurance or endurance is the ability of muscles to work for a certain duration of time using a special energy system, namely the ability of aerobic endurance to utilize energy during exercise or activity. Endurance in the world of sports is the ability possessed by muscle tissue in the body during activities that utilize endurance capabilities to prevent fatigue during bodily activities. [27]. Endurance is closely related to the length of activity carried out, that is, the higher the activity, the greater the ability of each athlete's muscle system to work.

Therefore, good endurance abilities are very important for every athlete to have. The preparation of training programs must be adjusted to the abilities being trained so that these abilities increase and this preparation cannot be separated from the objectives of the training program. If we examine muscle activity, endurance can be defined as the ability to carry out a group of muscle activities over a long period of time[28]. The term endurance or endurance in the world of sports is known as the ability of an athlete's body organs to resist fatigue during activities or work[29].

Sportfishing requires good endurance because when the angler starts carrying out the activity until it is finished it takes a long time. During this time, anglers will experience various things, such as waiting for the bait to be eaten, lifting the rod, throwing the rod and catching lots of fish of various sizes. To do this, an angler must have good endurance. If your immune system is weak, it will certainly affect your catch.

4 Conclution

Based on a literature review regarding sportfishing, it can be concluded that there are physical components in the body that contribute to a person's success in sportfishing, namely arm muscle strength, explosive power, balance, reaction speed, and endurance. Even though fishing techniques are also required to be mastered and fishing equipment that is adequate or meets standards, in the concept of sport, the contribution of these physical components has a big influence in the sport of fishing. Of course this is the center of attention, because anglers rarely pay attention to the physical components. If someone who plays fishing is physically weak, what can happen is a prolonged injury that can even result in the fisherman dying.

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