

Analysis of Hidden Danger in Open Water Swimming Competition

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Abstract. Open-water swimming is an exercise that can enhance the athlete's physical fitness. Even though different swimmers enjoy swimming in open water competitions, there are still safety consequences with this competition, and people must plan this hidden danger before the event. Athletes swim in open-water swimming competitions in lakes, rivers, and oceans. The difference between open-water swimming and traditional swimming in swimming causes much more uncertainty. This essay will take place on all the potential threats in an open-water swimming event. The essay will be analyzing in different aspects of the open water competition. First is the natural landscape, temperature, water quality, and water flow. All of these will affect the athlete's performance. Second, the emergency that can happen to the athletes. For example, body issues, cramps, or low body temperature. Third, the athlete's body condition, some of the athletes might have some body issues that do not fit this event, which will cause some additional problems for the hosts of the swimming event. Fourth, the ethics issues in the sporting event. With a sport that includes a big group of people attending it, there will be some unethical moves to get a higher rank.

Keywords: open water, safety, athletes, swimming, ensure, pool, risk

1. Introduction

Open-water swimming began long ago but has not been prevalent in all sports worldwide. In 2008 the Beijing Olympic open water swimming was brought out again [1]. Open water swimming can also be called "marathon swimming" it has been separated from other swimming events because it cannot occur in a regular swimming pool, which ten-kilometer swimming has become an Olympic event. This event is unlike traditional swimming in the pool; the open water swimming must host in lakes, rivers, or oceans. When athletes compete in different swimming environments, the significant change in the swimming environment is unpredictable. The event must plan for the potential environmental threat, for example, the water temperature, the landscape underwater, the water flow in that area, and the weather on the competition day. However, the environment has to be considered in the planning to ensure the safety of the athletes, and the ability of the athletes and volunteers must be counted in. The swimmers must be able to fix issues when they are by themselves. Many athletes must be able to self-rescue or find a way to get out of danger. However, every year there are 79% of all the people who drown are in open water swimming, which people have a very high chance of being in danger during open water swimming [2]. So the host of the competition must be able to know the local environment, the landscape underwater, weather and the experience of the athletes when

facing a hazardous situation. The athletes can know what conditions to avoid by analyzing the hidden danger during an open-water swimming event. They can learn how to escape precarious situations when they enter problematic areas.

Open waters swimming is a sport that combines competition, fitness, recreation, and leisure [3]. Participants can strengthen their institutions, sharpen their wills in sports, enjoy sports' fun, and enrich people's leisure time and cultural life. However, its unique characteristics, different from land sports, makes some potential risk for the participants, so safety is the top priority of open water swimming. Because there are many uncertainties in the natural environment, the length of the race is not the primary concern for many public water swimmers and enthusiasts. Still, the unpredicted situation that will happen in the competition is a challenge to numerous competitors since it has to be entirely dependent on the experience of the athletes and the reaction they give, which makes the athletes sometimes more vulnerable because when something happens during the sport, the consequences can often be fatal.

With many unpredicted amounts of uncertainty in the event, there has to be an analysis done to it to be able to find the solutions to it, which can minimize the harm to the athletes. It can make the event known by more and more people around the world, and with this, the host can make more adjustment to the event which can benefit them also it brings benefit to the athletes as well. For example, it gives them the experience, the pleasure, and the challenge of completing the swimming competition. The essay based on the problem facing open water swimming competition, and solutions that can solve the problem, which makes the swimming competition operate better. The problems facing open water swimming competition can separate to three categories environmental problems, Staff issues and Athletes issues, these will all affect how the competition operates.

2. Open-Water Swimming Introduction

Open water swimming competition the other name it is Marathon swimming competition. As the name says, it is a marathon in swimming, and the events are long distance. According to Fina, for an open water swimming competition to start, it has to be outside a swimming pool in a river, lake, or ocean [3, 4]. There are different events in open water swimming competitions, including open water Long distance competitions, Strait crossing races, and river crossing races. Open water swimming can divide into short-distance, long-distance, and marathon by race and record-setting. Short distance usually is 1.5 kilometers and lower, and long distance is usually 1.5 to 25 kilometers long. The marathon swimming race is 25 kilometers and longer than any swimming race, longer than 5 hours [3]. Some of the race in some sporting event counted as short distances, for example, Olympic 1500m race, triathlon swimming, and some race that is longer than 3 kilometer [4]. Open water swimming competition being a race that hosts in the wild, some things can predict and unpredictable risks involved. For example, illnesses, low body temperature, dehydration, wild animal or weather, or emergency safety voiceless problems exist. Also, there will be problems in the athlete's body, like heart problems or body issues that might happen during the race. The host and the athletes must know all the risks involved in the event beforehand. Moreover, they should be ready to deal with problems during competitions. To achieve safety in the swimming competition, the host of it have to ensure that there are no threats that involve anybody getting life-threatening damage, that there is no damage to other people, and that the athletes are sure that they get guided to do the right things that will not harm others.

The open water swimming competition will operate differently than a standard swim race in the swimming pool. In regular swim races, people will only start on the diving blocks, but in the open water races, there are no diving blocks so people will start on the land and have to go for first place when starting the race. In the middle of the race, all swimmers will be closer together, and there will

be people in the front or at the back of each other, so it will be very easy to grab onto other athletes [3].

3. Real Life Event

In March 2008, the world swimming championship in Melbourne. The open water swimming competition was scheduled at St. Kilda Beach [4]. However, the athletes participating in competitions worldwide have been through painful memory. Most have "escaped" the water due to many jellyfish near the beach, constantly disturbing the competitors during the race [4]. Zheng Jing was in a coma at the end of the women's 10-kilometer race because jellyfish had injured her. Luckily, she was able to regain consciousness after some medical treatment.

The 9th National Open Water Swimming Championship was held in the waters of the Qingjiang River in Hubei Province [5]. The Swimming Management Center of the State General Administration of Sports and the Provincial Sports Bureau jointly sponsored this competition. The mainland and Hong Kong, Macao, and Taiwan players, and some foreign athletes participated in this competition. A tragedy brewed in such a high-profile competition, and Wuxi athlete Jin Bokang, who represented Jiangsu, drowned in the competition [5].

4. Environment Issues

One of the essential things in open water swimming competitions is the environment or the competition places where the competition takes place. First is the water quality of the open water area. In many places, there is pollution in the water, which will cause health issues when athletes swim in them. The water first has to look clear. It should not have any trash flowing in it. The water is relatively clear, and the color of it is not weird. For example, the water should have a typical green color, and there should be some like of life in it, proving it is safe since it can hold life. Another place to look at is the type of disease or substance that could cause harm to the human body [6]. Sometimes the water could be contaminated by factory pollution or wildlife pollution. For example, a dead animal body flows in the water, and this pollution increases the risk of athletes having skins problem. Sometimes the athletes will encounter someplace where the water is polluted, the people will get skin rashes, which have little red pin poles on their skins, affecting the athlete's performance during the competition [6]. Chemical pollution in the water might cause different symptoms in different people. Based on the person's body conditions, then the polluted water will cause people with nose issues to be worse. While breathing, some of the water could go into the person's respiratory system, which makes the athlete cough, then the water will cause lung disease [7]. So the athletes will have to suffer for more treatment after the race. Sometimes water pollution can cause some pain in the body so that they will suffer more during and after the competition, and it will affect the athlete's performance so that the water quality will play a significant role in the open water swimming competition [8].

4.1. Water Quality Issues

With the water quality being said, the lake environment is also essential. Because in nature, the lakes will have water flows, rocks under them, and wild animals [4]. First, the water flows in many areas. The open water areas are in rivers and oceans, so there will be tides and some water flow speed in it, so the water cannot have a wave that is too big, which will restrict them from going forward, and it should not have a flow speed that helps the swimmers to go faster than average [4]. Moreover, in some areas, the water will suddenly increase its momentum due to a sudden drop underwater, which will not be appropriate for the swimmers to swim because the risk of athletes getting injured or drowning will increase. It is hard to predict that in a fast water flow speed, the athletes will or will not encounter any obstacles underwater, or will the water have any undercurrent that people cannot see because the undercurrent can happen anytime. When that occurs, the athletes will get sucked into the water, and it is hard for them to come back up, the risk of drowning will increase. So the open water area will not be suited for the event [5]. Second, the host has to analyze the water obstacle. In the wild, there are many things in the water—for example, rocks, trees, or even artificial objects. The host has to know all of it because this will increase the risk of athletes hitting themselves on the rocks. Sometimes the rocks in the water are very sharp due to the water flowing through them every day, so the athletes will hit their body parts or step on it will make them bleed, and by staying in the water, the risk of the bleeding part getting infected will increase. So the athletes will have more significant problems after the competitions and the host of this event has to look out for all the obstacles that could occur underwater. The third part is about the wild animal that could be in the water. In most rivers, no animals could harm humans that much [6]. However, in the oceans, many animals could cause harm to the human body. For example, in the oceans, there will be jellyfish, which are invisible most of the time, which makes it hard to avoid if they encounter one, and the poison will cause pain in the athlete's body or even harm the life of an athlete [9, 10].

4.2. Wild Animal Issues

During swimming competitions, the athletes have to travel a small distance from the land to the ocean, they will also have some risks. In some regions, there are snails underwater called cone snails. They will have a needle in them, which pumps poison into the human body, which causes severe pain and numbness for days. In some severe cases, it will cause the muscle to paralyze, causing falling into a coma and causing the respiratory system to paralyze. Eventually, it will lead to death [11]. It will still have some larger fish that could cause harm to humans. For example, even though most of the time sharks are not interested in humans, in some cases, when they are too hungry or think of humans as seals, they will attack humans. Most of the time, it will cause the death of people from the attack. So the host of the competition has to know about the wild animal that could occur in the regions and find ways where they can separate the animals and humans.

4.3. Weather Issues

The location of the competition is essential. However, another critical factor is the date of the competition because the host of the open water competition must choose a date when the temperature will allow the competition to operate. For example, the temperature will cause the water to be cold in winter. When athletes swim in water under 15 degree Celsius, then the risk of getting hypothermia and cold shock increases the possibility of drowning [12]. When people encounter cold shock and hypothermia, they will have rapid uncontrolled breathing, confusion, shivering, Body rigidity, and fatigue. When a person immerses themselves in the water with hypothermia for more than 30 minutes, it will contribute more to the cause of death. Also, on some rainy days, the water will accumulate on the high ground, which then causes the water flow speed to increase rapidly. Sometimes with a

landslide on the side of the river, more obstacles like wood and branches will be carried into the water, which increases the risk of people getting hurt during the race [12].

5. Staff Issues

The environment of the competition and the volunteer who helps will affect the competition's success because the lifesaver experience will affect how they decide on different things [5]. For example, when a competition starts, the lifeguard has to distinguish between people that are drowning and people that are swimming usually because sometimes, when the athletes are drowning in the middle of a crowd, it is hard to see because everyone is flapping their hand above the water, and the lifeguard could miss the chance of saving them in time, then it might cause the athlete to drown. Second, the technology of the lifesaving team, sometimes the advanced technology cannot be transferred from the hospital to the competition place, so sometimes as an athlete gets any severe damage from the environment or get any injuries from the wild animal in the local area, the lifesaver might not be able to make enough treatment for them, so the possibility that the injuries get worst will increase, which is a disadvantage to the open water swimming competition.

6. Athletes Issues

Last, the competition must also depend on the athletes. The competition's success will depend on the number of athletes that meet their body condition requirements. First is the athlete's body condition. All people have different body conditions, and sometimes the athletes might have congenital diseases, which promotes the potential of athletes getting severely damaged and affecting the reputation of the competition. So it will be essential to have a test for any hidden or body issues the athletes have [6]. For example, the host should know that whether a person has any heart, respiratory, or problems that will cause them to stop during the race should be looked out for carefully. Second, the ability of athletes to self-rescue is also essential. Because generally in an open water swimming competition there will be many people who attend it. When all of the people start together then, it will be hard for the lifesavers to find who needs to save, then the ability that the athletes can self-rescue, so before the competition, the host of the competition should make sure that all of the athletes know how to save themselves from a dangerous situation, so they should have lessons or meeting to tell the athletes on different ways to deal with a particular situation. For example, suppose the athletes get a cramp in the middle of the race. In that case, the athletes should know how to get to the land safely, or when they get tangled by aquatic, they have to know the way to get out of it, so have meetings to introduce people to how to deal with different special situations will be necessary on protecting the athletes and benefiting the sport, so more, and more people will know about the sport [5].

6.1. Ethical Issues

Neither the athletes' ability will affect the competition the ethical problems. During a race, all the people are trying to get a faster time, and while this happens, some people will make unethical decisions. In school, a teacher once went to a triathlon. They had to swim in a river at the start, but when they entered the water, another athlete pulled him on the leg and elbowed him on the back, so he almost drowned. The ethical issues in the race will be significant, and the referees have to be able to scout come off the unethical small moves that other athletes make.

7. Conclusion

The open water swimming competition has a lot of disadvantages and threats to themselves, but different steps can solve the risk of it. First, in the environment of the competition, there are a lot of

marine areas in the world, so the host of the competition can choose different locations which satisfy the water quality, and the temperature in that locations, and for any hidden obstacle underwater, or set up any barriers to separate the wild animal and the athletes before the competition the host can send some people to do field research to see whether the water is capable of hosting the competition. Second, the experience of the lifeguard and the lifesaving technology can be fixed by teaching all of the lifeguards and hiring a medical team with more medical technology that can treat different kinds of injuries. Third, for a host to analyze the athletes' ability, they can request the athlete to provide a medical report on their body conditions, so the host can make sure that there will not be any problem happening to the athlete when the competition has started. To ensure that the athletes have the knowledge to self-save when encountering problems during the race, the host of the competition can also teach the athletes how to self-rescue when facing danger. Last, ethical problem with athletes is inevitable. The competition host can only get more referees during the match to search for unethical actions from the athletes. However, open-water swimming is still good for people because it can benefit them physically and mentally. Still, people and athletes have to be aware of different situations that might happen. This essay will benefit associations who want to host an open water swimming competition, and it can inform some information to the swimmers about potential threats in open water swimming competitions. This essay revealed most of the threats and drawbacks to open-water competitors, which can benefit the people trying to host the competition or athletes who want to attend a competition like this, so they can know its danger before participating. The limitation of this paper will be that the disaster that may occur in the race is not taken into account. For example, landslides or tsunamis contribute to more endangered people during this process. Future research can be further analyzed in this respect.

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