

Original Research

Improving Sprain Management Skill Through Instagram And Simulation In Taekwondo Athlete

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ABSTRACT

Background: *The main problem in taekwondo athletes is the lack of knowledge and skills in handling sprain injuries using the PRICE technique. Protection, Rest, Ice, Compression and Elevation is a non-pharmacological therapy for the treatment of sprains. Sprain injury handling skills with PRICE can be taught to anyone, especially taekwondo athletes through Instagram media and training on simulation methods so that they have good skills in handling sprain injuries. This study aims to determine the effect of education through Instagram media and simulations on the skills of handling sprain injuries in taekwondo athletes.*

Methods: *The research used quasi-experimental design which involve pre-posttest with control group. The population was Taekwondo athlete community in Central Java. Samples were selected with total sampling technique. Subjects were 68 respondents consisting of 34 in each group obtained by simple random sampling technique. Education using video, leaflet and simulation provided to the control group, while the treatment group obtained material via instagram story, reels, videos, captions on Instagram and simulation. The measurement of Sprain injury management skills was using observation sheet. Mann whiney test performed the analysis.*

Results: *The results showed that sprain injury management skills score increases significantly in those two groups (p-value:0.000; α :0.05). The treatment group showed a higher increases of that sprain injury management skills than control group.*

Conclusion: *The finding highlights education using instagram and simulation is effective to increasing sprain injury management skills of Taekwondo athlete. It is recommended to apply instagram and simulation in order to upgrading the skills.*

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INTRODUCTION

The main problem in taekwondo athletes is sprain injuries. One of the limbs that can be injured is the ankle which occurs due to a sudden sprain and results in tearing of

the ligament fibers in the ankle joint (sprain) (Bleakley, Matthews, and Smoliga 2021). Taekwondo is a sport that uses physical contact, so there is no doubt that injuries often occur.

One of the injuries experienced, namely ankle sprain, occurs due to excessive stretching or trauma inversion and sudden plantar flexion so that the foot does not fully support the floor/uneven ground, this causes the sole of the foot to be in an inverted position, causing the ligament structure to stretch. Beyond normal physiological and functional length. This condition causes pain when contracting, the presence of pain causes immobilization resulting in a decrease in muscle strength and limitation of motion (Calatayud et al. 2014).

Factors causing injuries in taekwondo are divided into two, namely: the type of injury and the factors causing the injury, the type of injury factors such as: bruises, abrasions, ligament injuries, injuries to muscles and tendons, sprains of the knee, sprains of the ankle, dislocation of the fingers, fingers, and fractures, while the factors that cause injury are divided into two, namely: external violence (causes that come from outside) and internal violence (causes that come from within)(Yu 2012).

According to research results The Electronic Injury National Surveillance System (NEISS) in America shows that ankle sprain is influenced by gender, age and involvement in sports. Men between the ages of 15-24 have a higher rate of ankle sprains, and women aged 30 years have higher rates of ankle sprains. Half of all ankle sprains (58.3%) occur during athletic activities, proving that the highest percentage of ankle sprains is during exercise (Hiller et al. 2012).

Taekwondo injuries are more common during matches (60%) than during practice (40%). Taekwondo injury rates in American athletes range from 9-13%, namely 127.4/1000 for men and 90.1/1000 athletes for women (Doherty et al. 2014). Indonesian Taekwondo athletes the incidence of injuries ranges from 7-75%, namely in the 2016 Olympic Qualification International competition in the Philippines it reached 75% while in the 2016 Pre qualification it was only 6.8% The Ministry of Health of the Republic of Indonesia describes some data on the types and places of injury in Indonesia, namely the Special Region of Yogyakarta with the type of injury: abrasions/bruises by 56.1%, lacerations/slices 19.7 %, sprains by 36.1%, lower limbs by 64.5% and upper limbs by 33% (Risksedas 2018).

The foot, knee, ankle, thigh, and head were most frequently injured while practicing taekwondo, and contusions, strains, and sprains were the main injuries diagnosed. Taking a closer look at the injury diagnoses, the five major injuries were contusions (n = 319), strains (n = 89), sprains (n = 75), fractures (n = 51), and concussions (n = 50)(Ji 2016).

Treatments that can be done for the management of injuries include: non-steroidal anti-inflammatory drugs to reduce pain and swelling, stabilize the ankle using a brace, taping, balance exercises and exercise therapy to restore joint scope and strength of sensorimotor function (Kaminski et al. 2013). Based on research it was stated that when a taekwondo athlete was injured during a match or practice, there were still some injury treatments that were not optimal and inappropriate, due to a lack of knowledge of injury handling by the coach and the taekwondo athlete himself, which caused the injury. Experienced is getting worse (Millrose et al. 2021).

Based on observations in the field, it was found that the knowledge and skills of coaches and athletes were still low regarding the handling of injuries, when athletes

were injured the coach only asked the athletes to get out of the field, apply balm, ice packs and rest.

There are several non-pharmacological therapies in dealing with ankle sprain injuries including exercise therapy in the form of: Range of Motion (ROM), Towel Crunches, Plantar Fascia Stretch, as well as the first treatment with the right PRICE for the first treatment of ankle sprains using the Protection, Rest, Ice, Compression, Elevation technique (PRICE). PRICE is a technique used for first aid when an ankle sprain occurs, starting within 24 hours of the injury, to minimize pain, swelling and spread of the injury (van den Bekerom et al. 2012).

In addition to providing material, a sports injury first aid simulation was also carried out using the PRICE method, it was concluded that the simulation method could significantly increase respondents' knowledge. Other research conduct that based on the results of the t test, it was found that the significance value was obtained by a p value = 0.0001, it can be concluded that H₀ is rejected if the p value is < 0.05, which means that there is an effect of health education on knowledge and aid skills (Bleakley et al. 2007). The first is a sports injury with the PRICE method on futsal members. The problem of lack of knowledge on handling injuries can be done by means of health education. Health education is all means or efforts to display messages or information conveyed by communicators and can have a positive effect on health maintenance and improvement.

There are several educational methods, including: lectures, discussions, experiments, sociodrama, drills, and questions and answers (Brcina et al. 2014). As for some of the weaknesses of existing educational methods, examples of weaknesses in the lecture method: educators do not fully know to what extent the material can be captured by students, inappropriate language selection will lead to wrong interpretations, tend to make students not creative (Yin et al. 2013). Weaknesses of the discussion method: not all students dare to express their opinions, it takes a long time, only focuses on one or two topics (Guilfoyle et al. 2012).

Along with the development of technology, various forms of teaching/educational materials have emerged, one of which is social media which has great potential to carry out health promotion and other health interventions, and it is easier to reach targets at every level. Social media is designed to facilitate interactive social interactions based on internet technology that changes the pattern of information dissemination from previously being (one to many audiences) to social media (many audiences to many audiences) (Ansari and Khan 2020).

The development of the use of social media in Indonesia is growing rapidly and Indonesians spend 1.5 hours a day on the internet, currently mobile phone users in Indonesia reach 180 million people from around 220 million Indonesian population. Instagram users in Indonesia have increased, namely in 2010, Instagram had 1 million users, in 2011 it had 5 million users, in 2012 it was 30 million, in 2013 it was 50 million users, and made Instagram one of the social media networks with the highest number of users. continues to grow until 2019 reaches 61 million and in 2020 Instagram users reach 69.2 million, the narcissistic habits of people make Instagram the right media for free expression and popular among the public (Mukti and Putri 2021).

Social media has a major impact on people's lives in various fields ranging from politics, economy, social and culture. The positive impacts are: providing space for positive messages, familiarizing friendship relationships, increasing knowledge insight (D 2019). Another advantage of social media is that it can be used easily to search, obtain, and utilize diverse information in the corridor of freedom of communication and

its flexible nature is able to improve relationships between individuals and groups in cyberspace (Pourkhani et al. 2019).

Social media also has an impact on students, they spend time using social media via laptops or mobile phones and many of them already have accounts that they manage themselves to interact with friends and new people around the world. This was adapted by researchers to support learning through Instagram, Instagram is an application that functions to take photos, videos and share photos to various existing social networks (Zhang 2013).

The advantages of learning media through Instagram are that it does not require special training and is easy to apply at any level of education, supports lifelong learning, does not require large costs, and allows collaboration between students and educators on certain tasks (Abazi Bexheti, Ismaili, and Cico 2014). This study aims to determine the effect of education through Instagram media and simulations on the skills of handling sprain injuries in taekwondo athletes.

MATERIALS AND METHOD

The study applied a quasi-experimental design which involved pre-posttest with a control group. The population was Taekwondo athlete community in Central Java. Samples were selected with total sampling technique. Subjects were 68 respondents consisting of 34 in each group. Education using video, leaflet and simulation provided to the control group, while the treatment group obtained material via instagram story, reels, videos, captions on Instagram and simulation.

Respondents were asked to follow a special Instagram account for research to be given education about handling sprain injuries with PRICE via Instagram in the form of videos, photos, status and captions for 8 times in 2 weeks then the researchers validated the education on Instagram by means of respondents giving likes and comments on posts that have been uploaded.

The second meeting of the respondents in the treatment group, intervention was given on how to handle sprain injuries using PRICE with the simulation method practicing directly for 2 times a week each 30 minute session by the researcher and research assistant. The measurement of Sprain injury management skills was using observation sheet based on PRICE Guideline from Accident Compensation Corporation (ACC). Mann whitney test performed the analysis.

The research has ethical clearance by the Commite of Ethic of Kusuma Husada Surakarta University with ID number 082/UKH.L.02/EC/VI/2021, respondents were voluntary, and the respondents had the right to withdraw at any time without further explanation. Respondents were given verbal and written explanations before being treated. Data were stored securely and anonymously in compliance with the data protection act.

RESULTS

The study showed that majority of the respondents in both the treatment group and control group were women, 61.8% in the treatment group and 67.6% in the control group (table 1).

Table 1. Characteristic of Taekwondo athlete (n=68)

Characteristic	Treatment group		Control group	
	n	%	n	%
Gender				
Men	13	38.2%	11	32.4%
Women	21	61.8%	23	67.6%

The study found that Sprain injury management skill in Taekwondo athlete in the treatment group who receive education through Instagram and simulation increase from less category 100% to good category 70.6% and medium category 29.4%, while in the control group who receive education through video, leaflet and simulation also showed a increase skill from 100% in less category to good category 11.8%, medium category 55.9% and less category 32.4%.

The Wilcoxon shows a p-value= 0.000 ($p < 0.05$) which means that there is significant difference between Sprain injury management skills before and after receiving intervention both in the treatment and control groups (Table 2)

Table 2. Sprain injury management skills in the treatment group and control group (n= 64)

Variabel	Group	Skill category						p-value
		Good skill		Medium skill		Less skill		
		n	%	n	%	n	%	
Treatment group	Pre test	0	0	0	0	34	100	0.000
	Post test	24	70.6	10	29.4	0	0	
Control group	Pre test	0	0	0	0	34	100	0.000
	Post test	4	11.8	19	55.9	11	32.4	

The study identified that skill category in the treatment group had greater increase than control group. The Mann-whitney test shows $p= 0.000$ ($p < 0.05$) which means that there is a significant difference between Sprain injury management skill in Taekwondo athlete in the treatment and control group. (Table 3)

Table 3. Sprain injury management skills post test in the treatment group and control grup (n=64)

Variabel	Group	p-value
Post test	Treatment group Control group	0.000

DISCUSSION

The majority of the respondents were women both in the treatment group and control group. Gender is the meaning of the characterization or division of two human sexes to identify the differences between men and women from a non-biological point of view, namely from social, cultural, and psychological aspects. Gender differences between men and women have different roles, functions, and responsibilities which are the result of social construction and can change according to the times.

Men and women have different values and traits so that they can influence decision-making as well as in terms of skills, in men focusing on the value of competition and focusing on the final results to be achieved while in women more focused on the implementation of work properly and harmoniously. The involvement of

women in the world of martial arts is evidenced by the emergence of martial arts competitions for women. This can encourage women to be more active and more involved in competitions and training in the field of martial arts (Zaidi 2010).

Learning achievement is the result of a process in which there are a number of factors that influence each other, the high and low student achievement depending on these factors, one of the influencing factors in achieve learning achievement, namely gender or what is commonly referred to as gender. Several studies to examine how gender relates to male and female learning compared to using variables including innate ability, attitude, motivation, talent and performance. Some studies believe that influencing gender factors (influence differences between men and women) is due to differences biologicals in the brains of boys – and girls that are known by observation, that girls, in general, excel in language and writing, whereas boys excel in mathematics because better spatial capabilities (Xin et al. 2019).

There are several arguments that can be used to explain the difference between men and women. Women in this case are positioned as individuals who have better academic achievement than men. Mitsos and Browne explain that there is evidence to explain that women have higher levels of better learning achievement than men. According to them, women are more motivated and work more diligently than men in doing school work.

However, in the classical discussion of the differences between men and women, women Eleanor Maccoby concluded that men have better math and visospatial skills while women are better at verbal skills. Another statement was made by Diane Halperen that girls are more successful in language arts, understanding reading and written and oral communication while boys seem to be slightly superior in math and mathematical thinking (Cosgrove, Mazure, and Staley 2007).

Skills metacognition of female students is higher of male students. It shows that in general gender has an effect on students' metacognitive skills, where female students tend have good metacognitive skills better than male students (Xin et al. 2019). Average student metacognition skills girls are better than man students. Some of the results of the research above shows that female students are more excel in metacognitive skills compared to male student (Cosgrove et al. 2007; Xin et al. 2019). This can explained that biologically, different brain structures allows male students and students girls are different in some ways such as processing ability, respond to information, or save long term information.

Areas of the limbic system on men and women have structures different. More explained that women generally have hippocampus is larger than in men, so it has the potential to increase long term storage memory better. In addition, other parts of the brain that have a different structure between men and women are part of the cerebral the cortex which controls thinking, decision making, and functions intellectual. The female brain receive about 20% more flow blood and have strong neural connections more (Zaidi 2010). It is possible women can process and respond to information more quickly

Based on the research conducted, there was a significant change in the level of sprain injury handling skills in the treatment group. Health education is an effort to display information submitted by communicators and aims to improve public health, one of the efforts to convey and disseminate information by direct delivery such as providing training and can also be delivered through the media of health education itself using social media (Manca and Ranieri 2013).

Social media is a means to interact and communicate through internet-based online communication media, one example of social media is Instagram, while Instagram is an application that displays various features that can be accessed by the wider community (Zhang 2013). In addition to social media, the delivery of health education can be done by providing training in the form of simulation methods.

Simulation is imitation of something for the purpose of problem solving, decision making and value classification in an individual, organizational or social context and aims to improve skills. The researcher argues that the learning method through simulation can improve skills and the skills themselves are obtained from a knowledge that is applied in the form of action (Abazi Bexheti et al. 2014; Zhang 2013).

Based on the description above, the researcher argues that the learning media or discussion given to the control group by being given a video via the whatsapp group is indeed effective, but in increasing the level of skills carried out in the research there is minimal, this is because whatsapp has several advantages such as easy, practical use, quickly saves internet data, can be accessed only with mobile phones, and has various features that can be used to support communication such as New Group, New Broadcast, WhatsApp Web, and Settings with the help of internet services.

The use of WhatsApp helps communicate activities in distance learning in the midst of the COVID-19 pandemic. However, in its implementation there are several obstacles that cause the increase in knowledge in the control group to be minimal compared to the treatment group, such as not being able to control the focus of the minds of all audiences to keep an eye on information that is conveyed. Has been obtained from the whatsapp group, it is difficult to download a large file or video due to problems with signals and quotas that are not supported, and they are embarrassed to ask questions in the whatsapp group discussion forum and those who are shy about asking prefer to ask through a contact person.

Learning media is one component of learning that has an important role in teaching and learning activities. The use of media should be a part that must get the attention of educators in every education Learning Activities. Therefore, educators need to learn how to determine learning media in order to effectively achieve learning objectives in the teaching and learning process (Manca and Ranieri 2013). The use of media in learning is intended to be able to help overcome various obstacles in the teaching and learning process including psychological barriers, physical barriers, cultural barriers and environmental barriers.

In general, learning media have uses: 1) Clarify the presentation of messages, 2) Overcome space limitations, 3) Overcome the passive attitude of students (Bodle 2011; Tadros 2011). To apply what is written in the National Education System Law in learning teachers cannot teach only by using the lecture method, it can make students feel bored as a result students do not understand what is conveyed by the teacher, So to overcome this, the use of media as a teaching aid is very necessary.

In learning activities the teacher must be able to create a fun learning process. One way to solve this problem is to change the conventional accounting learning patterns into more varied learning. One method that can be used is simulation. In addition to changes in learning methods, there is also a need for a media that can increase student motivation in learning activities, one of which is the use of simulation methods which expect learning activities to be more enjoyable.

Thus, the use of the simulation method in the learning process is in accordance with the trend of modern learning which leads to individual and small group learning,

heuristics (seeking their own gain) and active) (Motola et al. 2013; So et al. 2019) Simulation has three main characteristics that can increase the activeness of students in the learning process, namely: 1) Simulation is a form of teaching technique that is oriented to the activeness of students in learning in class, both teachers and students take part in it; 2) Simulations are generally problem solving which are very useful for training students to take an interdisciplinary approach in learning. Besides that, you can also practice skills socially relevant to people's lives; 3) simulation is a learning model that is dynamic in the sense that it is very suitable for dealing with changing situations that require flexibility in thinking and providing answers to rapidly changing circumstances (Al-Elq, 2010).

Simulation can increase students' motivation and attention to topics and students' learning, as well as increase direct involvement and active participation of students in the learning process. Improve students' abilities in cognitive learning, including factual information, concepts, principles and decision-making skills (Motola et al. 2013). Student learning is more meaningful.

Meanwhile to learn something quickly and effectively, you must see, hear, and feel it. Based on the opinion above, it can be concluded that learning will be faster and easier effective if in learning students use the combination of several senses (So et al. 2019). In addition, in the student simulation method, accustomed to act according to the actual situation so that students are expected to have skills in dealing with their future lives.

Video learning is one of the media that has elements of audio (sound) and visual motion (moving image). As a medium of learning, video acts as an introduction to information from teacher to students. Convenience for repeat video (replay) and how to present structured information to make video including one of the media that can improve students' abilities in understand a concept (Musa et al. 2021). From the conclusion in above in a learning video must has audio and visual elements.

The presenter does not only provide a visual only moving images but also must be able to make interesting and inviting sounds students understand the concept of something learn it. In addition, the video is also rated fun and does not make students feel bored in learning, so increase students' learning (Lavoie and Clarke 2017). By using videos, learning becomes more interesting and can increase student learning motivation.

Student feel with the method applied by the teacher attract attention so students can focus to the material given by the teacher. Video media is the most appropriate and accurate learning media in conveying messages and will be very useful help students understand. With the video media, students will better understand the material presented educators through the screening of a film.

The elements contained in video media such as sound, text, animation, and graphics. With the video media, participants are able to achieve abilities in the cognitive (mental brain activities), affective (Attitude), psychomotor (skills/skills) and improve interpersonal skills (Al-Elq 2010; Musa et al. 2021).

Recent research shows that many students today are very good at using digital media and developing new ways of learning that rely heavily on social media and the web. Internet-based learners have varying skill levels, abilities, and adoption rates. More importantly, they allow students and teachers to participate and they work more effectively and interestingly with friends, even across cultures.

Technology creates a more engaging and innovative classroom experience, and students are more interested in the learning process if they use the right tools. Social

media tools enable students to think critically and creatively. Strategies and best practices are explored to address how educators use social media to adapt to the heterogeneity of digital students and engage new way of learning (Tadros 2011).

The advantages of social media have characteristics evolution, revolution and contribution. Social Media is called; (1) evolution because he shows new developments in the way a person communicates, for example by e-mail, (2) revolution, because for the first time in the history of communication, we all have very free access, communication can be done instantly and globally, and (3) as contribution because the presence of social media can differentiate everyone's ability to share and contribute messages to target (Tadros 2011; Tarakcı and Tufan Yeniçıktı 2016).

Researchers argue that the educational method through Instagram media is currently in great demand by many teenagers because Instagram is a popular application that is identical and inherent in the lives of teenagers to use social media even when they are doing activities such as eating, walking and there are also benefits from Instagram, among others, being able to display and presents all forms of information needed by its users, one of which can be used as a learning medium.

Teenagers are people who really follow trends and don't want to be outdated, so to follow this trend, teenagers use social media, one of which is Instagram. Instagram itself displays various forms of broad information and can show self-existence in teenagers by utilizing features such as posting videos, photos, captions and statuses on user accounts (Mukti and Putri 2021).

Students are ready for technological change in learning. Currently facebook, twitter and Instagram is the most popular SNS platform. Therefore, the platform can be used as a learning tool that has a positive impact on learning (Abazi Bexheti et al. 2014; Manca and Ranieri 2013). Instagram was launched in October 2010 and its development very fast, instagram can get one million users only one month after it was officially launched. By 2021, the number of users has reached 1.07 billion active users (Tarakcı and Tufan Yeniçıktı 2016).

This growth is faster than other popular social media such as facebook, twitter, blog and My Space. The rapid development of technology is directly proportional to the development of social media. This matter impact on the learning process of students in the classroom. According to McGraw-Hill, learning effectively with the right type of technology is one of the best ways to ensure students succeed in the classroom (Andrea Poscia, Emanuela Maria Frisicale, Paolo Parente, Daniele Ignazio La Milia 2011). The development of social media is considered sufficient affect students academically.

Social media is wrong an alternative learning media. In academia, Social Networking Sites (SNS) are considered very useful in learning because their community-centered designs support the spread of native languages and encourage interactions that occur outside the classroom (Tadros 2011). In this case, learning media that utilize social media have been widely used and one alternative solution that could be used. developed is the use of social media as a medium of learning (Abazi Bexheti et al. 2014).

Social media was chosen because it is a trend that is currently developing. In particular, social media Instagram is the most used social media by the world community, even the Indonesian people are active in using Instagram social media the most. By utilizing this social media as a learning activity to create student habits in using social media properly and wisely. Learning media from the Instagram learning method is a new learning media assisted by smartphone technology. The use of

smartphones has been widely used by high school students and even junior high school students (D, 2019).

The most basic reason to use Instagram as a learning media is because students are used to using Instagram, moreover, educators don't need a lot of money to apply it because almost all students already have laptops and gadgets, besides that, using Instagram doesn't require extensive training. Special, so that it is easy to apply at the educational level whatever (Andrea Poscia, Emanuela Maria Frisicale, Paolo Parente, Daniele Ignazio La Milia 2011).

In addition, there are several other reasons that can be taken into consideration for making Instagram a learning medium; (1) support teaching for learning throughout life, instagram can be used by every level education, (2) Instagram gives students the authority to create their own digital content and publish it online, besides that it can stimulate the activity of students and educators in teaching, (3) Instagram allows collaboration between students and educators on certain projects or tasks for the sake of learning objectives (Abazi Bexheti et al. 2014).

In particular, Instagram has several features that can support online learning, including Live Streaming, which is the same as teleconference, which facilitates teacher interaction in monitoring all student learning material needs. The Post Feed feature allows students to collect assignments or works which will later be sent via Instagram in the form of Posts. Until Instagram TV, which makes it easy for students to collect assignments and works in the form of videos or animations related to learning with a maximum duration of 30 minutes and a minimum of 1 minute.

Instagram Social Media also has an attendance feature, namely by following the teacher's account first and after that attendance can be continued in the form of face-to-face through the live streaming feature. By adapting the Instagram application as an online learning media application. Teachers can easily see the progress of student learning in a more concise and up-to-date manner, because the Instagram application, whose development is loved by many students, captures moments and photos in the form of posts.

The provision of education apart from Instagram can also be provided through the simulation method. The use of the simulation method also has an effect on improving the skills of the treatment group, this is because simulation is a method that can increase student motivation in the learning process and can be used as a provision for students to face real situations by fostering self-confidence and courage so that it can affect attitudes, knowledge and student skills (Lavoie and Clarke 2017).

Meanwhile, the control group was only given a video on handling sprains through the whatsapp group so that the control group respondents could only see and remember but were not given simulation training, so that the increase in sprain injury handling skills was minimal, in addition to information obtained through video (audiovisual) obtained through the group.

WhatsApp is a combination of two elements, namely sight and hearing so that a recording process occurs in his vision when the image will be captured and processed which is called phototransduction involving photoreceptor components on the retina which convert light energy into electrical energy then the hearing process goes through three stages, namely the stage of transferring physical energy in the form of a stimulus. Sound to the auditory organ, the conversion or transduction stage is the conversion of the physical energy of the stimulation to the receiving organ and the stage of transmitting nerve impulses to the auditory cortex which is located in areas 39 to 40 in

(lob) us temporalis) the side of the brain is channeled to the auditory cortex which is later stored in long-term memory in the cerebral cortex (Andrea Poscia, Emanuela Maria Frisicale, Paolo Parente, Daniele Ignazio La Milia 2011; Cosgrove et al. 2007).

In practice there are several obstacles that cause the increase in knowledge that occurs in the control group is minimal compared to the treatment group, such as not being able to control the focus of the minds of all audiences to keep an eye on information that has been obtained from the whatsapp group, difficulty downloading a large file/video because constrained by signals and quotas that are not supported, as well as being embarrassed to ask questions in the WhatsApp group discussion forum and those who are embarrassed to ask questions prefer to ask through a contact person, on the other hand the control group is also not given training with the simulation method, where the simulation method is focused on respondents to things that are considered important by educators and try to directly practice the educational process that has been given so that important things can be observed carefully.

Besides, by trying independently it is easier to understand. The simulation method can reduce errors when compared to reading or listening, because one gets a clear picture from the observations, some issues that raise questions and doubts can be clarified during the health education process (Al-Elq 2010; Motola et al. 2013).

CONCLUSION

The research concludes that education through Instagram and simulation on Sprain injury management skills in Taekwondo athlete lead to significantly increase. The research has identified that education through social media Instagram leads to greater increase in Sparain injury management skill than given education through video or leaflet. The research recommends that media social Instagram is an alternative complementary simulation to increase the skill or psychomotor. Future research should use a larger sample and compare the Instagram with ather social media.

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