



Analysis of Kerud Rock Climbing Sports Activities in Sumedang Regency

Dera Rusnindar¹, Dewi Susilawati², Rizal Ahmad Fauzi³

^{1,2,3} Universitas Pendidikan Indonesia : PGSD Physical Education, Indonesia

Article Info

Article History :

Received : March 2025

Revised : March 2025

Accepted : March 2025

Keywords:

Sports Activities,
Sport tourism
Rock Climbing,

Abstract

The rise of rock climbing sports in any circle regardless of age and gender, rock climbing sports are also classified as recreational sports as well as extreme sports of course with this certainly giving rise to several different views and assessments especially in Sumedang Regency which indeed only has a few cliffs. The new cliff is Kerud Cliff which is located in Jatihurip Village, Sumedang. This study aims to analyze rock climbing sports activities and see the potential for rock climbing tourism in Kerud Cliff, Sumedang Regency. By using a qualitative method approach and phenomenological design, this study focuses on the experiences, perceptions, and meanings given by the community, rock climbing enthusiasts who are often active in rock climbing sports that are developing in their area. The data collection method is through triangulation with participatory observation, in-depth interviews, and documentation with 6 informants consisting of 2 local residents, 2 Mapala and often rock climbing activities, and 2 general nature lovers..



*Corresponding email : Derarusnindar@upi.edu

ISSN 2685-6514 (Online)

ISSN 2477-331X (Print)

INTRODUCTION

Currently, rock climbing is very popular among some groups where it is used as a tourism sport or sport tourism, according to research, sport tourism is defined as those who travel to a destination with the aim of participating in or winning a sporting event (Praisra et al., 2021 Tarlow, 2017). In addition to just looking for recreation or sports tourism and it turns out that these activities are also related to the development of physical activity, according to experts physical activity is a component of a complex process that involves the development, learning and assimilation of skills, values, norms, and self-perception (Dwi Agustina et al., 2023). urrently, the popularity of rock climbing has continued to increase since the development of rock climbing over the past century (Rugg, C., Tiefenthaler, L., Rauch, S., Gatterer, H., Paal, P., & Ströhle, 2020). Where now rock climbing in Sumedang has also begun to develop in the last few years.

Rock climbing in Sumedang also has several training places that are often used for tourism sports activities and one of them is the Kerud cliff which is located in the village of Jatihurip and there are two types of artificial cliffs or original cliffs and in rock climbing there are also two

categories of routes where the vertical route and the scrambling route, and the Kerud cliff is also usually used by several groups of climbers ranging from children to adults from the age of 10 years to 60 years and usually the children are sons or daughters who really like to do rock climbing sports,has something to do with research (Fauzi et al., 2023). and for adult activists usually from students even to activists who already work and usually in the Kerud cliff itself usually practice from Thursday and Saturday at a time that usually starts from 15.00 to 18.00 in the Kerud cliff has not become a tourist area, before becoming a tourist area of course you must first know the perspective of the community around the Kerud cliff regarding rock climbing in the Kerud cliff which is indeed close to the community, where there are many different perspectives from several local communities in the Kerud cliff itself, and the question we all have as rock climbing sports practitioners is the perspective of the community on the cliff, there is also a community view of sports that is based on religion, namely Islam. This is a way for people to express their belief that sports are good for a person's health. As a result, the core of community sports is health sports, showing the importance of sports for

physical and mental/spiritual development (Khairuddin, 2017).

Ideally, climbing is usually often associated with sport tourism, which is usually only for sports related to recreation (Wiguna, et al.2023). There has been an agreement among academics that there are two categories of sports tourism: active and passive, since the topic of sports tourism attracted a lot of attention in the 1990s. When visitors engage in active sports tourism, they physically take part in related activities or sports such as rock climbing and adventure travel (Saatchian et al., 2021). There are also several opinions regarding recreational sports. Recreational sports are sports that are played in their spare time with the aim of achieving physical and physiological goals, such as maintaining overall fitness and health, as well as emotional goals such as pleasure, joy, and happiness (Fitriantono et al., 2018).

From several quotes above, recreational sports are also included in the development of physical activity where not only recreation is focused on but also physical development for some groups who are serious about this rock climbing sport. Furthermore,(Hardiyono, 2018). highlights the importance of the ability of muscles or muscle groups to deal with

stress or difficulties that arise during physical activity. One of the basic physical components is strength, because strength is very important for all physical activities, not only in sports but also important for everyday life. Athletes must strive to maintain a healthy physical condition to achieve their goals and prevent injuries.

Of the several physical activities that can be done, there are extreme sports, namely rock climbing. Rock climbing can be described as a "natural" physical activity, which is inherent in humans like walking, running, or swimming. Because modern lifestyles require less physical activity than a few decades ago, many people prefer rock climbing to meet workload needs as the main factor in maintaining health status (Michailov, 2014). Even climbing sports can be considered safe sports compared to other sports, with the most popular supporting branch being rock climbing (SRC). SRC is a type where fixed anchors are placed at specifically defined intervals on the climbing wall. Although SRC looks like a dangerous sport, injury statistics actually show a much safer activity with lower injury rates, when compared to many common sports such as basketball, football, volleyball, handball, etc. (Aras & Ewert, 2016).

By conducting this research on the analysis of rock climbing sports activities, it is certainly a new breakthrough regarding other studies where previous research discussed the rational choices of women as rock climbing athletes, a case study of women who are members of the Indonesian Rock Climbing Federation in Riau (Rifandi, 2017). Where in previous studies only discussed the perspective of society and several rock climbing activists regarding the genre. As for research on rock climbing, namely TOT (Treasury of trainer) parameter test for rock climbing athletes PLPP DIY 2021 (Nur Ahmad Muharram et al., 2021) this study discusses the training of trainers to improve the development of training towards achievement in competitions, and does not discuss the specific perspective of the local community regarding rock climbing sports.

So from the research on the analysis of rock climbing sports activities Kerud Kab. Sumedang hopes to produce research that can develop rock climbing sports in Sumedang because before further opening up UMKM land in the local community of Kerud Cliffs, we have valid data that was born from this research, as well as introducing this rock

climbing sport as a tourism sport or sport tourism and the most important thing is to know the perspective of Sumedang rock climbing activists, especially the community around Kerud Cliffs, Jatihurip, and changing the mindset of the local community that rock climbing sports can be enjoyed by anyone and is a very beneficial physical activity.

METHODS

In this study I took a qualitative method where the method is a systematic and planned way or procedure to achieve certain goals. In the context of research, the method includes the steps taken to collect and analyze data. Qualitative methods with phenomenological design are used to solve problems by describing in depth the perspectives of local people on rock climbing sports activities in Kerud Sumedang. Qualitative research is a new method because its popularity has not been long, this method is also called post-positivistic because it is based on the philosophy of post-positivism, and as an artistic method because the research process is more artistic (less patterned), and is called an interpretive method because the research data is more concerned with the interpretation of data found in the field (Rusandi & Muhammad Rusli, 2021). The data design used is

Phenomenology where design is Design in research refers to the plan or framework used to organize and carry out research. Phenomenology comes from the Greek *phaenesthai*, which means "showing oneself, showing reality to those who observe it. (Nasir et al., 2023). The use of qualitative methods of phenomenological design is based on the phenomenon of experience regarding the perspective of local people on rock climbing sports. In addition, this design was chosen because it can provide a deeper and more specific picture of rock climbing sports activities because it is carried out directly in the field involving several sources.

Participants

In qualitative research, participants in the study are the entire group of individuals or objects that are the focus of the study. The population includes all elements that have certain characteristics that are to be studied. The population in this study is the Mapala around Sumedang, and also rock climbing enthusiasts on the Kerud cliffs of Sumedang. And I also chose a sample where the meaning of the sample here is In the context of research, "sample" refers to a subset or part of the population selected for analysis, and I chose to use the simple random sampling method. Probability

sampling is a sampling technique that provides an equal opportunity for each element (member) of the population to be selected as a sample member. The type of random sampling sample is the taking of sample members from the population is done randomly without considering the strata in the population. This study used a sample or subject of 6 consisting of 2 Sumedang Mapala communities, 2 general nature lovers, and 2 local communities near the Kerud cliffs. They were chosen as samples and as sources because they were based on the interests and needs of researchers who were in accordance with the problems that would be raised in this study.

Sampling Procedures

This research will be conducted on a rock cliff named Kerud Cliff in Sumedang Village, Jatihurip District, South Sumedang District, Sumedang Regency, West Java Province. This location was chosen because a survey had previously been conducted at the location and the researcher found a case related to the problem that would be used as research. Previously, the researcher had also conducted interviews and observed related problems regarding the conflicting perspectives of local people on rock climbing sports at Kerud Cliff, Sumedang, so that a topic was obtained regarding the research that would be conducted this time.

Materials and Apparatus

According to Suharsimi Arikunto, the data collection instrument is a tool chosen and used by researchers in their data collection activities so that the activity becomes systematic and easier for them (Asiva Noor Rachmayani, 2015). This research will be carried out using a triangulation instrument according to Sugiyono (2015:83) data is a data collection technique that combines various existing data and sources. Through observation, interviews, and documentation. Observation aims to observe and analyze the Kerud rock climbing sports activities, researchers will participate in rock climbing activities to observe more deeply about rock climbing activities. After that, researchers will record all behaviors, social interactions, and rock climbing activities, as well as tourism potential on the Kerud cliff. Interviews were conducted to obtain in-depth information from various local communities and various rock climbing activists on the Kerud cliff regarding rock climbing activities. Questions in the interview will be conducted to obtain answers ranging from basic to in-depth. Then the researcher will record and record all informant answers to obtain data and conclusions using, so this study will use and utilize MSPDM (Marketability,

Sustainability, Participatory, and Disaster Mitigation) analysis (Priatmoko et al., 2021).

Procedures

Researchers are tools in qualitative research. Planners and implementers are what researchers do. In addition, researchers are also required to handle the collected data, which includes evaluation, understanding, and drawing conclusions from the entire data (Dwi Agustina et al., 2023). The procedure in this study consists of four stages including the planning stage, semi-structured interviews, implementation stage, and data processing. The three stages are explained as follows.

Design or Data Analysis

The data collection techniques used to conduct this research are by means of participatory observation, in-depth interviews, and field notes. Participatory observation can be done by directly following the rock climbing activities on the Kerud Seumedang cliffs carried out by the local community and rock climbing activists so that they can observe and interact directly with them. In-depth interviews were conducted with the local community around the Kerud cliffs and rock climbing activists on the Kerud Sumedang cliffs to obtain specific data related to the research problem to understand their experiences and perceptions of rock climbing activities.

Field notes were made to add supporting data to the research, which can be in the form of notes on situations that occur and also things related to the research problem.

In this study, researchers used three types of data analysis, namely data reduction, data presentation and drawing conclusions. Data reduction aims to separate data that will be used from data that is not used. This data presentation is to present data that has been reduced so that the data is easy to read and understand. This conclusion drawing is to take valid data after carrying out the two previous stages, namely data reduction and presentation.

RESULT

After conducting interviews with 2 Mapala organization members, 3 general nature lovers, and 1 local community near Kerud Cliff regarding the analysis of rock climbing activities in Kerud, Sumedang Regency, the following findings were obtained to answer the research questions.

Rock climbing activists' views on the sport of rock climbing towards recreational sports on the Kerud cliffs

Rock climbing activities in Tebing Kerud significantly turned out to have several views on recreational sports that vary from several sources. Findings related to the role of rock climbing activity analysis in Tebing Kerud can be explained through the following project map:

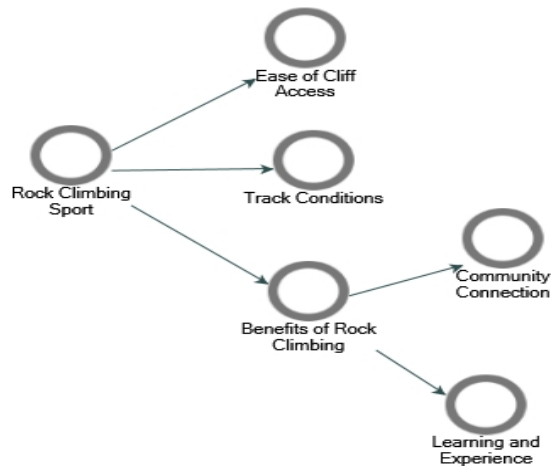


Figure 1 Project Map of the views of rock climbing activists regarding the sport of rock climbing towards recreational sports on the Kerud cliffs.

In the image above, there are interconnected components that show that rock climbing activities in Tebing Kerud, Sumedang Regency, produce several views on complex and tapered recreational sports. One of the sources stated that Tebing Kerud has easy access to the location, relatively easy track conditions, and is suitable for beginners:

Source 1: "I saw that the access to the cliff location near the center of Sumedang city was enough to make me interested in continuing my activities there. I didn't see the grade or level of the slope of Kerud Cliff, but for my first experience climbing Kerud Cliff, I got something interesting from the character of the segments/rocks which are indeed classified as a safe route for beginners."

The answers from other sources also have similarities to the views of rock climbing at Tebing Kerud, namely easy access and a route that is relatively friendly for beginners. This statement was reinforced by other sources:

Source 2: "Because as a beginner in rock climbing, at that time Tebing

Kerud was one of the cliffs that was not too high and not steep or vertical, so it was very suitable for use as a practice for beginners in rock climbing. On the other hand, access to Tebing Kerud was also in my opinion relatively easy to reach because the area is not far from residential areas."

This is in line with (Hall & Hall, 2024) research, which shows that accessibility is an important factor in making rock climbing an inclusive recreational sport. In his study, Hall discussed how diversity, equity, and inclusion in the rock climbing community are greatly influenced by factors of access and ease of location. With easier access, the sport becomes more open to various groups, including beginners.

It is proven that the ease of access and relatively easy trail conditions allow beginners or those who want to try a light trail to do rock climbing activities at Tebing Kerud. In addition to accessibility, rock climbing also provides various benefits for physical and mental health. (Polanco et al., 2025) in the journal *Frontiers in Sports and Active Living* emphasized that recreational sports, including rock climbing, contribute to improving physical fitness and mental health by increasing muscle strength and endurance.

In addition, the study by (Feng & Phromphithakkul, 2024) also highlights the benefits of recreational sports in improving public health in general. They show that sports-based recreational activities, such as rock climbing, have a positive impact not only on individuals but also on the surrounding community by creating a healthier and more active lifestyle.

In addition to the views of the informants regarding the cliff access that is close to residential and urban Sumedang

and the trail conditions that are friendly to beginner climbers, several informants also highlighted the benefits obtained from rock climbing at Tebing Kerud. In general, these benefits include physical, mental, and recreational aspects, which are in line with various studies on outdoor sports.

Interviewer 3 emphasized that rock climbing is not only a recreational activity but also a physical exercise that helps develop hand and leg muscle strength, which supports climbing techniques:

Interviewee 3: "For some rock climbers, it may just be a fun way or to fill their free time. But for me personally, the benefits are numerous because by doing activities at Tebing Kerud I am training myself to train my hand and leg muscle strength/power so that my technique can be helped little by little."

Meanwhile, Interviewee 4 highlighted the benefits of rock climbing in terms of overall health, both physically and mentally:

Interviewee 4: "For physical reasons, of course our bodies will be kept healthy because this sport drains a lot of energy and thoughts that make our bodies sweat. For mental reasons, we can control our fear of heights by practicing regularly."

This finding is in line with research by (Li et al., 2018) which shows that rock climbing can improve flexibility, balance, and muscle strength through physical exercises that focus on the upper and lower body. And this finding research by (Ahmad Fauzi et al., 2020) This study emphasizes that novice climbers experience significant improvements in their physical abilities, including endurance and coordination.

In addition, research by (Pijpers et al., 2003) and showed that rock climbing also has psychological benefits, especially in overcoming fear and increasing focus

and mental resilience. This supports the view of Interviewee 4, who highlighted that rock climbing can help someone control their fear of heights with regular practice. Research by (Bentley, 2024) also confirmed that rock climbing as a recreational sport contributes to improving mental well-being, especially by providing challenges that can increase self-confidence and personal satisfaction after completing a climbing route.

The impact of rock climbing activities on Kerud

In developing an analysis of rock climbing sports activities at Tebing Kerud, several significant impacts were found. The motivation of rock climbing enthusiasts at Tebing Kerud gave birth to various impacts, ranging from increased courage, increased awareness of safety, to an understanding of risk management in this extreme sport. Safety in rock climbing is the main factor that must be considered by every rock climbing activist, especially regarding the use of safety gear according to climbing standards. These findings are shown in the following project map.

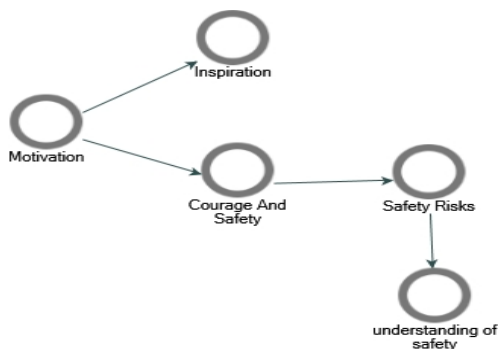


Figure 2 Project Map Impact of rock climbing sports activities in Kerud

Based on the findings of several sources who do have the motivation to do rock climbing activities in Kerud, there are several different reasons, some want to increase interest in rock climbing sports in Sumedang, some are motivated to increase physical and mental strength, several

statements from sources that are the impact of rock climbing activities in Kerud:

Informant 5: "My goal in introducing rock climbing is to introduce that this sport is very fun, beneficial for our bodies if done routinely and regularly according to schedule while still paying attention to the main factor of safety. Regardless of later after mastering it, whether you want to become an athlete, a worker at height or a rescuer, it depends on your personal seriousness and perseverance in learning this sport."

Informant 6: "I am interested in trying rock climbing because I feel challenged to try new things and test my physical and mental abilities. But as a beginner on the other hand I still have my own fears so I chose Kerud cliff because like my answer in the previous question, this cliff is not too high and steep, so I think it is safer to practice and hone basic skills in rock climbing."

Recent research by (Jong et al., 2024) highlights that outdoor activities such as rock climbing have a positive impact on mental health, helping to reduce stress, increase self-confidence, and build resilience to challenges. The study also shows that recreational sports such as rock climbing contribute to character building and increased risk management skills. As for the impact of rock climbing activities that produce findings obtained from several sources which produce other impacts stated by these sources, namely the risk of safety management in rock climbing activities. Which was conveyed by one of the sources where he is a safety master who has long been involved in the field of rock climbing and reinforced by one of the sources:

Resource person 5: "By learning the basics of rock climbing itself, such as knowing the equipment and its functions that will be used, whether it is still suitable

for use or not. Also learning many things, especially the installation of safety equipment according to SOP and knowing ropes, especially knots, and belayer techniques that are safe for climbers."

The statement above was also reinforced by other sources that the risk of safety management has an impact that rock climbing activists must at least know at least about understanding safety, which was conveyed by one of the sources:

Resource person 3: "For me, in any activity, especially extreme sports, we must be equipped with basic skills such as PPGD. What must be prepared for a rock climber, apart from processing techniques in climbing, must also be equipped with beday techniques in case of an accident that results in a broken bone or open wound to stop the bleeding. What is even more vital if we want to learn something, don't be half-hearted, we must also learn the CPR technique or cardiopulmonary resuscitation if an accident occurs that results in the victim being unconscious. It is very important to learn BHD or basic life support." This view is supported by research by (Xu et al., 2024), which identified that fatigue factors and lack of safety understanding in climbing and rock climbing activities can increase the risk of injury. This study emphasizes that risk management, understanding safety equipment, and first aid techniques are important skills that must be mastered by climbers.

In addition, (Hornby et al., 2024) research highlights that an effective safety management approach in extreme sports can reduce the likelihood of accidents and increase individual awareness in managing risks. This study revealed that rock climbers who have been trained in risk management are more likely to have better resilience and mental readiness than climbers who only focus on technical skills.

Rock climbing activities in Kerud can be an attraction in the field of tourism sports and become a local community UMKM in Kerud cliffs



Figure 3 Project The map of rock climbing activities on Kerud Cliff can be an attraction in the field of tourism sports and become a local community UMKM on Kerud Cliff

From this rock climbing sport activity, it has an impact on the attraction in the field of tourism sports where several sources stated that Kerud Cliff has a great opportunity to become a tourism sport because there are several factors that influence this as stated by source 1 as follows:

Source 1: "Very potential, depending on how some groups want to package a product"

Source 2: "In my opinion, Kerud Cliff has great potential to become a tourist spot, it just needs a little support from local residents or also adventure tourism promotion"

Source 3: "Yes, I think Kerud Cliff has great potential to become a rock climbing tourist spot. The location, as I mentioned, is relatively easy to reach and not too far from residential areas, in my opinion, is an added value to attract tourists, especially beginners who want to try practicing rock climbing without having to face challenges that are too extreme because the paths are not too steep or vertical. If managed properly, Kerud Cliff can offer facilities such as guides who already have safety master certificates, rental equipment, and maybe even for training and competitions. If promoted properly, it can certainly be an interesting tourist area."

And also reinforced by one of the sources who is indeed a safety master and often directly involved in rock climbing, and the statement from this source is the same as other sources, namely emphasizing the tourism potential that must be managed properly, which makes this cliff a place for sports tourism, the statement from the source is as follows:

Source 4: "Surely when everyone has the same goal and wants to work together, they just want to advance Tebing Kerud as a place for Educational and Recreational Nature Tourism as well as a facility for rock climbing and vertical rescue training as well as other safe and comfortable activities with neatly and orderly coordinated management"

Research by (Duglio & Beltramo, 2017) in the journal *Island Territories and Sustainable Development* revealed that good management in the sports tourism sector can contribute to local economic growth, increase small business opportunities, and attract investors in the sports tourism industry.

The impact of the existence of rock climbing sports on the Kerud cliffs certainly attracts other rock climbing enthusiasts, especially in the field of tourism sports and even allows the Kerud cliffs to be used as a place to become an educational tourism sports venue, but it must go through a good process and management from local residents and communities who want to open tourism sports on the Kerud cliffs.

DISCUSSION (Times New Roman 12)

Rock climbing activities at Tebing Kerud generate various perspectives from enthusiasts of this sport. Based on the interview results, the main factors that make Tebing Kerud attractive as a rock climbing location are the ease of access and routes that are suitable for beginners. This convenience is in line with research

findings showing that recreational rock climbing can increase sports participation because of its easier accessibility compared to other extreme sports (Maples & Bradley, 2021)

In addition to the accessibility factor, rock climbing also has benefits for physical and mental health. Studies show that rock climbing can increase muscle strength, especially in the hands and arms, and increase physical endurance through repeated training (Assmann et al., 2021). In addition, rock climbing also contributes to increased cardiovascular endurance with a heart rate response that meets health standards (Fryer et al., 2018). The mental benefits are also significant, because this sport helps increase courage and reduce stress, which is in line with research showing that rock climbing can increase mental resilience and self-efficacy (Luttenberger et al., 2015).

Another impact that arises from rock climbing activities at Tebing Kerud is the importance of safety management. Several sources emphasized that climbers must understand safety standards and first aid techniques. This is in line with research that found that safety awareness greatly influences responsible behavior in rock climbing sports (Zahir et al., 2020). In addition, climbers must understand the risk of injury, because statistics show that rock climbing injuries tend to increase, especially in the upper and lower extremities (Pirruccio et al., 2022). Furthermore, the potential of Tebing Kerud as a sports tourism destination is also a major concern. The sources

emphasized that Tebing Kerud has great potential to be developed as a rock climbing tourism area, especially with community support and proper promotion. This finding is in line with research that shows that rock climbing can have a significant economic impact on local areas, especially in terms of job creation and increasing the tourism-based economy (Maples & Bradley, 2021).

Overall, the results of interviews and research indicate that rock climbing activities at Tebing Kerud have great potential as a safe and beneficial recreational sport facility, and can be developed as a tourist destination. With good management and support from the community and society, Tebing Kerud can become an icon of sports tourism in Sumedang that not only provides a recreational experience, but also increases awareness of the importance of safety in extreme sports.

CONCLUSION (Times New Roman 12)

So the conclusion of the researcher regarding the findings that do discuss the analysis of rock climbing activities in Sumedang Regency, focuses on the tourism potential and rock climbing sports activities in Tebing Kerud. This and from several sources that the researcher targeted tend to support and this Kerud cliff has the potential to become a rock climbing tourism in Sumedang that can indeed be tried by anyone and any age, with the note of using safe equipment and guided by climbers who are often on the Kerud cliff, from these findings the researcher hopes that in the future it will not only focus on sources who are indeed rock climbing activists but also on local communities who are close to the cliff in order to find

answers that do refer to field events. And also the researcher here discusses general, not really focused on its tourism potential alone.

Conclusion

Rock climbing activities in Tebing Kerud, Sumedang Regency, have significant potential as a recreational sport, a means of improving physical and mental fitness, and as a tourist attraction. From the interview results, it was found that the main factors that make Tebing Kerud attractive to climbers are easy accessibility and beginner-friendly climbing routes. In addition, the benefits of rock climbing are not only limited to the recreational aspect, but also contribute to increasing muscle strength, body flexibility, and courage in facing heights.

However, this activity also has safety risks that need to be managed properly. Awareness of the importance of using safety equipment, understanding basic rock climbing techniques, and first aid skills are crucial factors in reducing the risk of injury. Therefore, education and training related to safety need to be strengthened to ensure the sustainability and safety of this activity.

In addition to the sports and safety aspects, Tebing Kerud has great potential to be developed as a sports-based tourist destination. With good management, support from the local community, and the right promotional strategy, Tebing Kerud can become a rock climbing tourism center that not only attracts tourists but also contributes to the economy of the surrounding community.

Overall, the results of this study indicate that the development of Tebing Kerud as a sports and tourism destination needs to

be carried out comprehensively by considering aspects of accessibility, security, and economic potential. With a holistic approach and support from various parties, Tebing Kerud can become an icon of rock climbing in Indonesia that is safe, beneficial, and sustainable.

REFERENCES

- A. R. Feliansyah Wiguna, Indra Safari, R. A. F. (2023). Profile of Sumedang Sport Climbing Athlete. *Journal of Physical Education, Sport, Health and Recreations*, 12(3), 247–253.
- Ahmad Fauzi, R., Suherman, A., Safari, I., & Saptani, E. (2020). Simple Exercises at Home During Social Distancing to Avoid Covid-19. *Journal of Physical Education, Health*, 7(2), 31–37. <http://journal.unnes.ac.id/nju/index.php/jpehs>
- Aras, D., & Ewert, A. W. (2016). The effects of eight weeks sport rock climbing training on anxiety. *Acta Medica Mediterranea*, 32(1), 223–230. https://doi.org/10.19193/0393-6384_2016_1_35
- Asiva Noor Rachmayani. (2015). *INSTRUMEN PENELITIAN DAN URGENSINYA DALAM PENELITIAN KUANTITATIF*. 6.
- Assmann, M., Steinmetz, G., Schilling, A. F., & Saul, D. (2021). Comparison of grip strength in recreational climbers and non-climbing athletes—a cross-sectional study. *International Journal of Environmental Research and Public Health*, 18(1), 1–11. <https://doi.org/10.3390/ijerph18010129>
- Bentley, L. (2024). Psychological Benefits of Adventure Tourism. *Integrated Journal for Research in Arts and Humanities*, 4(2), 97–103. <https://doi.org/10.55544/ijrah.4.2.16>
- Duglio, S., & Beltramo, R. (2017). Estimating the economic impacts of a small-scale sport tourism event: The case of the Italo-Swiss mountain trail CollonTrek. *Sustainability (Switzerland)*, 9(3). <https://doi.org/10.3390/su9030343>
- Dwi Agustina, R. A., Harjanto, A., & Elvadola, C. (2023). Pengembangan Lembar Kerja Peserta Didik (LKPD) Berbasis Discovery Learning Mata Pelajaran IPA Kelas V. *Jurnal Pendidikan West Science*, 1(07), 422–432. <https://doi.org/10.58812/jpdws.v1i07.501>
- Fauzi, R. A., Suherman, A., Saptani, E., Dinangsit, D., & Rahman, A. A. (2023). The Impact of Traditional Games on Fundamental Motor Skills and Participation in Elementary School Students. *International Journal of Human Movement and Sports Sciences*, 11(6), 1368–1375. <https://doi.org/10.13189/saj.2023.110622>
- Feng, R., & Phromphithakkul, W. (2024). *Strategies for Excellence in Higher Education Fitness Centers : Mediating and Moderating Effects in a Structural Equation Model from Shanxi Province , China*. 30(4), 333–343.
- Fitriantono, M. R., Kristiyanto, A., & Siswandari, S. (2018). Potensi Alam untuk Olahraga Rekreasi. *Prosiding Seminar Nasional IPTEK Olahraga*, 1(1), 9–11.
- Fryer, S. M., Giles, D., Palomino, I. G., de la O Puerta, A., & España-Romero,

- V. (2018). Hemodynamic and cardiorespiratory predictors of sport rock climbing performance. *Journal of Strength and Conditioning Research*, 32(12), 3534–3541. <https://doi.org/10.1519/jsc.0000000000000001860>
- Hall, W. K., & Hall, W. K. (2024). *Recreating the Politics of the Outdoors: Diversity, Equity, Inclusion, and Justice in the Rock Climbing Community* by.
- Hardiyono, B. (2018). Efektifitas Model Latihan Kekuatan Badgan Terhadap Keberhasilan Pemanjatan pada Olahraga Panjat Dinding untuk Pemanjat Pemula. *Jurnal Ilmu Keolahragaan*, 17(1), 50–57. <https://jurnal.unimed.ac.id/2012/index.php/JIK/article/view/9963>
- Hornby, O., Roderique-Davies, G., Heirene, R., Thorkildsen, E., Bradbury, S., Rowlands, I., Goodison, E., Gill, J., & Shearer, D. (2024). What factors explain extreme sport participation? A systematic review. *Frontiers in Sports and Active Living*, 6(July), 1–12. <https://doi.org/10.3389/fspor.2024.1403499>
- Jong, M. C., Fernee, C. R., Stenling, A., Lown, E. A., Berntsen, S., Victorson, D. E., & Jong, M. (2024). Protocol of a randomised controlled multicentre trial investigating the effectiveness and safety of a wilderness programme on the mental and physical well-being of adolescents and young adults affected by cancer: the WAYA-2 study. *BMJ Open*, 14(5), 1–10. <https://doi.org/10.1136/bmjopen-2024-087626>
- Khairuddin, K. (2017). Olahraga dalam Pandangan Islam. *JOI (Jurnal Olahraga Indragiri): Olahraga, Pendidikan, Kesehatan, Rekreasi*, 1(2), 1–14.
- Li, L., Ru, A., Liao, T., Zou, S., Niu, X. H., & Wang, Y. T. (2018). Effects of rock climbing exercise on physical fitness among college students: A review article and meta-analysis. *Iranian Journal of Public Health*, 47(10), 1440–1452. <https://doi.org/10.1249/01.mss.0000519915.58401.b9>
- Luttenberger, K., Stelzer, E. M., Först, S., Schopper, M., Kornhuber, J., & Book, S. (2015). Indoor rock climbing (bouldering) as a new treatment for depression: Study design of a waitlist-controlled randomized group pilot study and the first results. *BMC Psychiatry*, 15(1), 1–10. <https://doi.org/10.1186/s12888-015-0585-8>
- Maples, J., & Bradley, M. (2021). Outdoor Recreation and Rural Transitions in Central Appalachia: Revisiting the Economic Impact of Rock Climbing in Kentucky's Red River Gorge. *Journal of Economic Impact*, 3(3), 186–195. <https://doi.org/10.52223/jei3032108>
- Nasir, A., Nurjana, Shah, K., Sirodj, R. A., & Afgani, M. W. (2023). Pendekatan Fenomenologi Dalam Penelitian Kualitatif 1. *INNOVATIVE: Journal Of Social Science Research*, 3(5), 4445–4451. <https://j-innovative.org/index.php/Innovative%0APendekatan>
- Pijpers, J. R., Oudejans, R. R. D., Holsheimer, F., & Bakker, F. C. (2003). Anxiety-performance relationships in climbing: A process-oriented approach. *Psychology of Sport and Exercise*, 4(3), 283–304.

- [https://doi.org/10.1016/S1469-0292\(02\)00010-9](https://doi.org/10.1016/S1469-0292(02)00010-9)
- Pirruccio, K., Shin, M., Ganley, T. J., Kelly, J. D., & Parisien, R. L. (2022). Rock climbing confers distinct injury risk in pediatric versus adult populations: an analysis of twenty-year national trends. *Physician and Sportsmedicine*, 50(4), 343–348. <https://doi.org/10.1080/00913847.2021.1932631>
- Polanco, A., Macdermid, P. W., & Berisha, M. (2025). *Editorial: Advancements in cycling performance enhancement strategies for cyclists: from amateurs to elite. March*, 10–12. <https://doi.org/10.3389/fspor.2025.1549760>
- Priatmoko, S., Kabil, M., Purwoko, Y., & Dávid, L. D. (2021). Rethinking sustainable community-based tourism: A villager's point of view and case study in Pampang Village, Indonesia. *Sustainability (Switzerland)*, 13(6), 1–15. <https://doi.org/10.3390/su13063245>
- Rugg, C., Tiefenthaler, L., Rauch, S., Gatterer, H., Paal, P., & Ströhle, M. (2020). (2020). *Emergências de escalada em rocha nos ALPS austríacos: padrões de lesões, análise de risco e medidas preventivas / Rock climbing emergencies in the Austrian ALPS: Injury patterns, risk analysis and preventive measures*.
- Rusandi, & Muhammad Rusli. (2021). Merancang Penelitian Kualitatif Dasar/Deskriptif dan Studi Kasus. *Al-Ubudiyah: Jurnal Pendidikan dan Studi Islam*, 2(1), 48–60. <https://doi.org/10.55623/au.v2i1.18>
- Saatchian, V., Azimkhani, A., Türkmen, M., & Laein, D. D. (2021). Cycling as transportation & COVID-19: Advantages of shared bicycles during epidemics. *Sport Mont*, 19(1), 51–57. <https://doi.org/10.26773/SMJ.210212>
- Xu, Y., Jian, Q., Zhu, K., Wang, M., Hou, W., Gong, Z., Xu, M., & Cui, K. (2024). Identifying fatigue of climbing workers using physiological data based on the XGBoost algorithm. *Frontiers in Public Health*, 12(2). <https://doi.org/10.3389/fpubh.2024.1462675>
- Zahir, A. H., Abdul Latif, R., Nawi, N. F., & M.kes, S. (2020). Safety Awareness Attitudes among Malaysian Climbers. *Environment-Behaviour Proceedings Journal*, 5(13), 259–264. <https://doi.org/10.21834/e-bpj.v5i13.2097>