

## SPORTS MEDICINE POLICY OF UNIVERSITIES: AN INTEGRATIVE REVIEW

**GERALD PLAZA AGPALO\***, MARSHALL JAMES P. DANTIC

*President Ramon Magsaysay State University, Zambales, PHILIPPINES.*

*\*Email: agpalogeraldplaza18@gmail.com*

**How to cite this article:** Agpalo, G.P., & Dantic, M.J.P. (June 2024). Sports medicine policy of universities: An integrative review. *Journal of Physical Education Research*, Volume 11, Issue II, 14-20.

**Received:** May 12, 2024

**Accepted:** June 28, 2024

### ABSTRACT

*It is written in textbooks sport medicine's importance to any athletic programs. Despite this, universities are still lacking sport medicine programs and policies. This review aimed to identify the key concepts and contents of sport medicine policy of different universities. There were 20 sport medicine policies reviewed in this study. The review revealed 11 key policies necessary in developing a sport medicine policy. The sport medicine policies selected in this review was published by universities from the USA. Based from the review, policy on injury prevention and rehabilitation should be the main focus on developing sport medicine policy. Likewise, the result of this study would serve as basis for another review in sport medicine policy.*

**Keywords:** Sports, sport medicine, policy, universities.

### 1. INTRODUCTION

Sports medicine originated in the Ancient Greeks, which they based off preventative medicine, (Hill, 2019). It has been around for millennia, and its significance to the athletic programs is well-defined. However, there is still an existing problem around the world that sport medicine is not given enough attention. Take Botswana for example, the primary objective of their sport policy is the improvement of athletic performances, contribution of sport to society, level of sport participation, and the increase of major sporting events hosted (Moustakas & Tshube, 2020). The same case with Sweden that only aims for mass participation in sport through widened recruitment (Fahlén & Stenling, 2016). Even a sporting giant like China, the primary focus of their sport policy is the country's transformation into 'world sport power' (Zheng, et al, 2019). None of the mentioned countries offers enough attention to sport medicine, and there is a concern that local government lacks understanding of sport policies.

Policy reforms is stimulated by the need to solve a societal problem (Stylianou et al., 2017). Bekker et al. recommends that key sport safety agencies shall collaborate with stakeholders in developing a macro-level policy that has a large coverage that is accessible, and can be easily adapted and implemented by wide range of sport communities including universities. These policies must provide a welcoming environment that promotes healthy lifestyle to achieve a healthy sporting community (Cameron, 2014), and avoid high medical expenditure caused by collective physical inactivity (Pratt et al., 2012).

Sport helps with a range of known university strategic areas such as enhancing the overall student experience (Brunton, & Mackintosh, 2017). Regardless of how sports may help students, injury becomes a barrier to sport participation. According to the survey conducted by the National Safety Council in 2019, there were 417 000 sport-related injuries.

**Correspondence:** Gerald Plaza Agpalo (MAEd), Instructor, President Ramon Magsaysay State University, Zambales, PHILIPPINES, Email: agpalogeraldplaza18@gmail.com

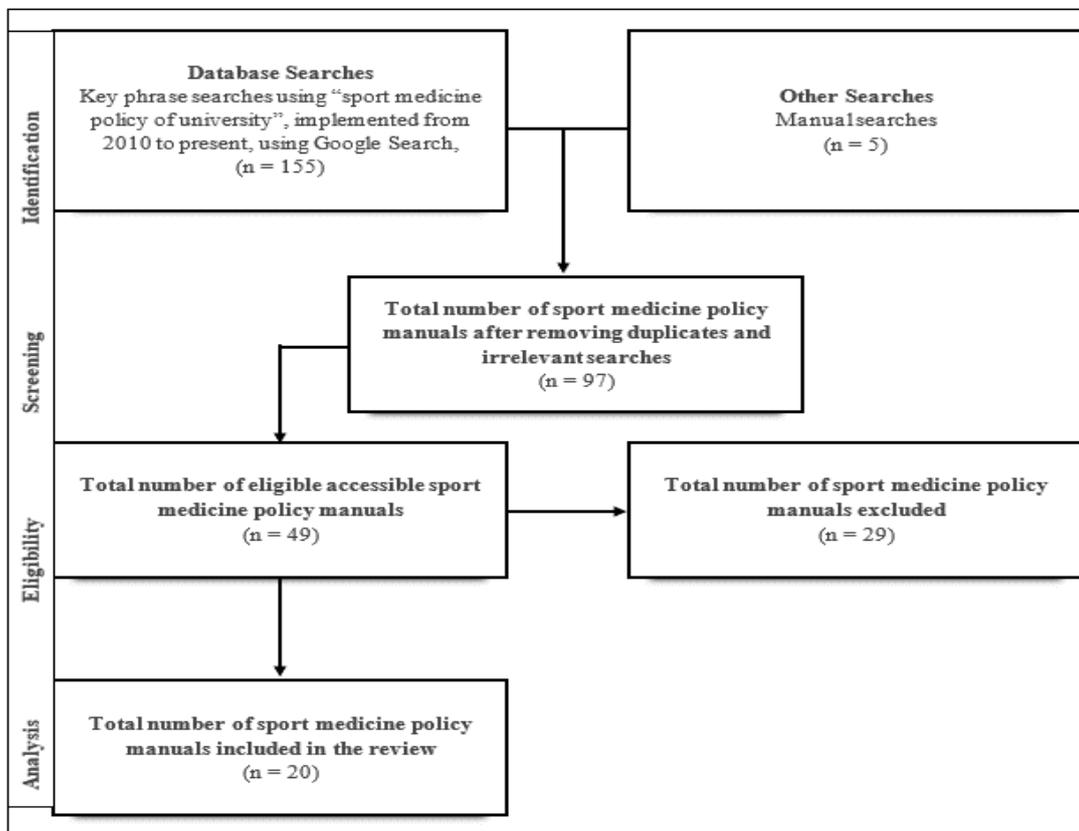
Additionally, Andreoli (2018) reported that lower limbs were the most injured body parts among athletes. Sports injuries are preventable. However, there are conflicts among researchers regarding the findings that may be best solutions to prevent injuries (Hanson et al., 2012). Another problem is some coaches is knowledgeable enough and well-trained but struggles to put things in practice (Poulos, & Donaldson, 2011). There must be sport medicine policy to avoid this situation.

Universities have a real opportunity to develop meaningful, collaborative, research-based sport medicine policies that may help in the athletic programs (Parnell et al., 2018). The development of sport policy undergoes a series of steps – definition, formulation, implementation and evaluation (Stritmatter, 2018). Realist evaluation is the best approach in identifying the strengths and weaknesses of a sport policy (Chen, 2018).

This review aimed to identify the content of sport medicine policy of different universities. Moreover, the researcher aimed to obtain basis of a possible development of sport medicine policy of the university from the manuals analyzed in this review.

## 2. METHODS AND MATERIALS

Sport Medicine Policy of universities and colleges were collected using Google Search engine. The collected materials are manuals in Portable Document Format (PDF). The key phrase used to search the materials is “sport medicine policy of university”



**Figure 1: Flowchart of sport medicine policy manual selection**

The sport medicine policy manuals were all implemented in the last 10 years. The researcher gained full access of the manuals. Upon searching in Google Search engine using the key phrase mentioned above, there were 155 sport medicine policy manuals shown. The researcher checked if all of the searches are available in full text and downloadable. Upon

checking, 49 manuals are eligible for review. Finally, there were manuals which were excluded as they are not published by a higher educational institution. Free-listing method was employed to identify the policy themes included in each manual.

After identifying the Sport Medicine Policy subject to this review, the manuals were arranged alphabetically. The analysis started by using free-listing method. The focus of this review is the content of sport medicine policy of universities. Policy themes were listed for each manual.

Descriptive analysis was used to analyze the data gathered from the manuals. The methodology used in this review is based on the framework of Whittemore and Knaft.

**Table 1: Framework of integrative review by Whittemore and Knaft**

Stage of Review	Illustration of Decisions and Issues
Problem Identification	Sport is a big part of the curricular programs of universities. However, it cannot stand alone by itself. There should be fields of studies that will support the development and maintenance of sports. Sports medicine is one of the field that could help to the development of sport activities in universities. Despite the necessity of sports medicine, there are still universities that do not see sports medicine as an important part of the sports program, and that they do not have programs for sports medicine. Therefore, sport medicine policies of different universities shall be reviewed in order to further discuss the development of a sport medicine policy.
Literature Research	Sport medicine policy is the primary focus of this review. The search used the keywords “sport medicine policy” using Google Search engine. There were 155 sport medicine policy manuals searched. A screening was conducted. Duplicate copies and irrelevant policy manuals were removed, as well as sport medicine policy manuals of community, high school and private organizations because the scope of the review is limited to colleges and universities. After a stiff screening, there were 20 sport medicine policy manuals left for review.
Data Evaluation	The 20 sport medicine policy manuals included in this review which matched the scope, concept, purpose, and inclusion criteria were carefully studied, checked, and analyzed using a tabular presentation that includes the publisher, year, and local. The evaluation also includes the policies covered in the published manuals.
Data Analysis	The sport medicine policy manuals have no common format used. The content policies also vary. There were common policies to be noted, and there were also ones that seem to be left out by other universities. The development of the sport medicine policy manuals may have been based from the needs of the athletics program, and the advice of the policymakers.
Presentation	To present the common content of the sport medicine policy manuals, a summary of all the manuals was discussed.

### 3. RESULTS AND DISCUSSION

The researcher gathered 155 sport medicine policy manuals of which 20 were subjected to this review. Each sport medicine manuals were carefully scanned and read to identify the similarities and differences, as well as the common theme of the policies included. There were 11 common policy themes identified. Safety is always the priority in whatever activity we do. The manuals vary their policies on their priorities.

#### Vision-Mission Goals and Objective Statement

Vision-Mission, Goals and Objectives must be considered in policy making to provide organizations clear view of what the policies are for (Edwards, 2014). Out of 20 sport medicine policy manuals, 11 of them have their VMGO statement. This just shows that 55% of the selected provide a clear view of what they want to achieve, which in most cases is to reduce sport injuries through a strong sport medicine program.

### **Admission and Retention Policy**

Only 10 sport medicine policy manuals have admission and retention policy. Admission and retention policy focuses on the requirements of an athlete to be admitted or retained in an athletic program. This includes fitness test, athletic performances, and physical examinations.

### **Staff Policy**

Staff policy involves the employment qualification of staff, responsibilities of the sport medicine staffs and student-athletes, the consultation hours of the staffs, and their contact info. Among the selected sport medicine policy manuals, only 7 of them have staff policy.

### **Ethical Conduct**

Ethical conduct policy provides what to do and what not to do. It covers information confidentiality, professional conduct of staffs and student-athletes, etc. Out of 20 sport medicine policy manuals, 8 of them included ethical conduct.

### **Social Conduct**

Social conduct covers violence prevention, sexual harassment, social media etiquettes, dating policy and the social roles of student-athletes. Of all the sport medicine policy manuals selected, only 6 of them have social conduct policies. This is the second least in terms of frequency.

### **Operational Policy**

Operational policy includes the day-to-day operation of the athletic program. This includes the dress code during the training inside or outside of the gymnasium, travel procedures, clerical procedures, sport medicine kits, documentation, and sanitation. This is one of the most essential components of a sport medicine policy. However, only 6 sport medicine policy manuals in this review have operational policy.

### **Injury Prevention and Rehabilitation**

The primary objective of sport medicine is promotion and integration of research for faster rehabilitation of injury, and to prevent injuries. Injury prevention and rehabilitation policy discusses the protocols if an injury happens. It is expected that the sport medicine policy manuals included in this review have policy for injury prevention and rehabilitation. However, there is one that does not have this policy. There's no clear statement for its reasons.

### **Medical Issue Management**

Student-athletes are screened at the beginning of the school year or semester to determine their health. Most of the time, there are medical issues which are detected during the screening. This doesn't mean to deny student-athletes in an athletic program. The medical issue management policy gives provision to student-athletes that have existing medical issues. They are given opportunity to become student-athlete while undergoing simultaneous medication or rehabilitation of their existing medical conditions. Out of 20 manuals included in this review, 16 of them have a clear and concise policy on medical issue management.

### Disease Prevention Management

Disease prevention management policies are the same with medical issue management, but it focuses on the prevention of medical condition such as diabetes, obesity, etc. This also covers the prohibition of alcohol, drugs and smoking. Fourteen manuals have disease prevention management policies included in their sport medicine policy.

### Emergency Management Procedures

This is also called as emergency action plan in some manuals. Emergency management procedure states the processes when an emergency occurs such as earthquake, fire, or a fatal injury. This includes a mixture of plans, procedures and improvisation (Alexander, 2015). Out of 20 manuals reviewed, 11 of them have emergency management procedures.

### Weather Policy

Weather policy states what to do when inclement weather occurs such as lightning, typhoon, extreme heat, etc. Policies might include hydration during extreme hot weather, managing victims of lightning strikes, suspension and return to activity, and chain of commands. This policy is least frequently included among the reviewed manuals with only 5.

**Table 2: Frequency distribution of policies present in each sport medicine policy manual reviewed**

Policy	f	%
VMGO Statement	11	55.0
Admission/Retention	10	50.0
Staff	7	35.0
Ethical Conduct	8	40.0
Social Conduct	6	30.0
Operation	6	30.0
Injury Prevention and Rehabilitation	19	95.0
Medical Issue Management	16	80.0
Disease Prevention Management	14	70.0
Emergency Management Procedures	11	55.0
Weather Policy	5	25.0
N = 20		

Table 2 presents the frequency distribution of policies present in the manuals reviewed. The most frequent policy is Injury Prevention and Rehabilitation with 19 out of 20 – this is solely because it is the primary objective of sport medicine. On the other hand, the least frequent policy is Weather Policy. Regardless of the frequency, these policies are essential in developing a sport medicine policy.

**Table 3. Profile of sport medicine policy manuals reviewed**

Publisher	Year	Local
Appalachian State University	2018	USA
Azusa Pacific University	2016	USA
Boston University	-	USA
Dartmouth College	2010	USA
DePauw University	2013	USA
Embry-Riddle Aero University	2020	USA
George Mason University	-	USA

Kutztown University	2020	USA
Liberty University	-	USA
Manchester University	2018	USA
Texas State University	2020	USA
University of Georgia	2019	USA
University of Houston	2019	USA
University of North Colorado	2019	USA
University of Incarnate Word	2016	USA
University of Toledo	2015	USA
West Liberty University	2015	USA
West Virginia University	2019	USA
Wilkes University	-	USA
Wingate University	-	USA

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Table 3 presents the profile of the manuals reviewed. It indicates the publication date and local of the manuals. The manuals are published within 2010 and 2020. The most recent one was published in 2020, while the oldest one was published in 2010. It can also be observed that all of the manuals reviewed were published by universities from United States of America. This might relate to USA's dominance in the big sporting stages because they give sport medicine prior importance to competition. Athletic performance is related to degree of importance an organization gives to sport medicine (Mountjoy & Engebretsen, 2020).

#### 4. CONCLUSION

The present review presented key policies that a sport medicine policy must have. Policies on Injury Prevention and Rehabilitation is the most frequent policy present in the reviewed sport medicine policy. This implies that it is the main content of a sport medicine policy. Medical Issue Management and Disease Prevention Management are almost even when it comes to the degree of importance the publishers gave to these policies because these are still anchored to the primary objective of sport medicine. Although not frequently present, Weather Policy, Social Conduct, and Operational Policy are integral in the development of sport medicine policy. Regardless of frequency of the policies in the manuals reviewed, there is the fact that universities included these in the creation of their sport medicine policy. This just shows the importance of each policy presented in sport medicine policy manuals.

Furthermore, the policies identified from different sport medicine policy manuals in this review may possibly be the spark for another integrative review. The current review is superficial and does not cover an in-depth analysis of the policies.

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