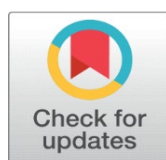


# CURRENT SCENARIO AND RESOURCES FOR WRESTLERS AND THEIR PERFORMANCE IN HARYANA

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## ABSTRACT

**Background:** Wrestling is the game which has been practiced since ancient times and it is one of the popular sports in India. This is an ongoing study in which all the Government approved wrestling academies in all 23 districts of Haryana has to cover. In this paper, 7 districts have discovered. The objectives of the study are to check the availability of services that are provided in the academies of Haryana with the special reference to physiotherapy services.

**Methods:** All Government and Government approved academies of 7 districts of Haryana state were taken in the study and remaining 16 districts are yet to be covered. Survey method in the form of questionnaire is used to find out the current scenario and resources for wrestlers and their performance in Haryana state.

**Result:** Majority of wrestlers say that there is no physiotherapist available during training sessions, only 9.5% of them say yes to physiotherapy services available during training sessions. Whereas injuries are most common in wrestling; So, physiotherapy services will definitely enhance the level as well as performance of Haryana wrestlers in world wide.

**Conclusion:** Physiotherapy services are most important aspect in wrestling. If physiotherapy is added, it can enhance the performance as well as boost up their career.

**Keywords:** Wrestling Academies, Services, Resources for Wrestlers, Performance

## 1. INTRODUCTION

Wrestling is an international discipline and an Olympic sport, for both men and women. This style allows the use of the wrestler's or his opponent's legs in offense and defense. Wrestling has its origins in catch-as-catch-can wrestling and the prime victory condition in this style involves the wrestler winning by throwing and pinning his opponent on the mat. In modern times, there has been increasing recognition of the role of Sports in Development. The International Charter of Physical Education and Sport, UNESCO, 1978 states that "Every human being has a fundamental right of access to physical education and sport, which are essential for the full development of his personality. (Pawiter Singh, 2018)

Wrestling is the low-key game as far as the number of special equipment are concerned. The wrestlers compete in the area which can take the shocks of their actions. The wrestlers enter the game area hands-free.

Wrestling is one of the ancient sports introduced to ancient Persian and Sumerian civilizations about 6000 years ago. It is so ancient that it has been mentioned in the national epics such as the one by Ferdowsi (Rabihi 2008).

The effective performance in wrestling involves the determination, allocation for the achievements which require data large amount of fund every year. Also, equipment such as balls, bags, kick pads, knee pads, masks, shoes, singlets and athletic (track and field) materials, requires either purchasing, replacement or repairs either purchasing, replacement or repairs, Bucher and Krotte (2002) thought that the facilities should be well planned and constructed with an eye in future. Often, facilities are constructed within a very short period of and are very difficult to expand or exchange. According to pate et al. (1997) it might be impossible to achieve satisfactory results from students whose training facilities and equipment are inadequate or of sub-standard. It is also noted that most of the PE students lack exposure to modern sophisticated infrastructural facilities and equipments for training.

In Physical Education Colleges Maintenance should be established by college administration with proper replacement of facilities and equipments PE. Bucher and Krotte (2002) thought that the equipment and facilities should always be maintained. in a serviceable condition. Procedures for caring facilities and equipments should be reutilized. and all equipments should be checked and then repaired, replaced, or serviced as needed and stored properly. Facilities and equipments should be very attractive and esthetically pleasing and should be easy and economically maintained durably the planning construction, and use of facilities should consider the following aspects: (a) Validity, (b) Utility, (c) Accessibility, (d) Isolation, (e) Departmentalization, (f) Safety, (hygiene and sanitation) (g) Supervision, (h) Durability and Maintenance, (i) Beauty, (j) Flexibility and Expansibility, (k) Economy and (1) Acoustics.

Wrestlers should have special diet which will enhance their level of sports in competition. WEIGHT LOSS through dietary restriction has been speculated to slow the somatic growth (McMurray R. G., Proctor C et al, 1991, Smith N. J. 1982, Williams, M. H 1993) of adolescent wrestlers, although there are no reported effects on growth in height. Previous studies (Roemmich J. N., Sinning W. E. et al 1977, Sinning W. E., Wilensky N. et al 1976) of pubescent wrestlers have shown that several skeletal breadths and body girths have decreased incremental growth during the season and increased incremental growth during the postseason.

Wrestlers are permitted only to attack and to use their upper body and, then, holds below the waist are forbidden, whereas in freestyle they are permitted to use their whole body during the competition (Federation Internationale De Lutte Association (FILA), 2016). The main objective of each wrestler is to physically dominate an opponent and to establish clear physical control over him/her. Wrestlers compete in a challenging environment involving repetitive bouts of high-intensity actions (e.g., attacks and counterattacks) alternated by submaximal work of low-intensity activity or pause (Horswill CA. 1992, Ylinen JJ, Julin M et al 2003). Wrestler's physiological demands are complex, requiring athletes to have highly developed capacities of maximal strength, power, muscular endurance, maximal aerobic power, and anaerobic capabilities (Horswill CA. 1992, Ylinen JJ, Julin M et al 2003). The short quick bursts of maximal power activities during the match are maintained by the anaerobic system, whereas the aerobic system manages the wrestler's ability to maintain effort throughout the duration of the match and accelerates the recovery process within and between successive matches (Callan SD, Brunner DM et al 2000, Karnincic H, Tocilj Z et al 2009). As a result, modern wrestling taxes both anaerobic and aerobic energy system with a different level of intervention (Callan SD, Brunner DM et al 2000, Mirzaei B, Curby DG et al 2009, Passelergue PA, Lac G. 2012)

Optimal athletic performance results from a combination of factors including training, body composition, and nutrition. (Hinton PS, Sanford TC et al, 2004) Nutritional needs are higher during adolescence than at any other time in the lifecycle, regardless of the level of activity, because of rapid gain in height and weight (Petrie HJ, Stover EA et al 2004). Rosenbloom CA, Loucks AB, et al 2006] Young athletes have more nutritional needs than other adolescents because of physical activity and physical development, especially those athletes who exercise strenuously in order to maximize their performance. (Papadopoulou SK, Papadopoulou SD et al 2002). Any ignorance in their diet can lead to injury.

As wrestling is a contact sport and its arduous nature, and compulsory physical contact leads to high injury rate. (Barroso BG, Da Silva JM et al 2011) Wrestling is second only to tackle football for the frequency of injury in high school athletes. This is in spite of having the sixth-highest average annual participation of boys in high school sports. (Murray DG 1991) This sport involves all parts of the body in voluntary and involuntary movements. Various biomechanical forces are imposed on both athletes due to the very nature of this game, leading to injury to different parts of the body. (Akbarnejad A, Sayyah M 2012). Almost all injuries involved in combat sports are caused by mechanical energy, and this manifests as musculoskeletal injuries. Musculoskeletal injuries usually occur when the body experiences overload through accident or overuse (Pappas E: 2007, Saragiotto BT, Di Pierro C et al 2014). The frequency and severity of these injuries depend on several factors and are the result of their interaction at a point in time. These factors are the type of exposure (competition vs. practice), style of wrestling, gender, age, etc. Hence, to record reliable epidemiological data, it is essential to determine these accurately. This is the first step towards building effective injury prevention program (Shea KG, Grimm NL et al 2011). The knee, shoulder, and ankle were the most commonly injured regions, and injuries to them

were often the more serious. Sprains, strains, and contusions were the most common injury types. (Glenn J, Jarrett et al 1998). As we know that physiotherapy services are very beneficial in the treatment of these injuries. Hence it is necessary to avail the physiotherapy services in order to overcome the injuries that an athlete (wrestler) has to face during a competition.

So, it is very necessary to explore the available Facilities & its impact on the performance of Wrestlers of Haryana State with special reference to physiotherapy services.

## 2. RESEARCH OBJECTIVES

Research objectives will be:

- To explore the available facilities in wrestling academies.
- To explore the available facilities along with physiotherapy services in academies of Haryana State.
- To explore the impact of physiotherapy on the performance of wrestlers in Haryana State.
- To find out the role of physiotherapist among wrestlers.
- To determine the importance of physiotherapists among wrestlers.
- To evaluate the participation of physiotherapist in training as well as treatment of wrestlers.
- To identify the active participation of the physiotherapists and their impact on performances of the wrestlers.
- To identify the gap of active physiotherapist involvement during training sessions.

### HYPOTHESIS:

**ALTERNATE HYPOTHESIS:** There is a definite impact and importance of the physiotherapy and other required facilities on the performance of the wrestlers in Haryana academies

**NULL HYPOTHESIS:** There is a no any impact and importance of the physiotherapy and other required facilities on the performance of the wrestlers in Haryana academies

## 3. METHODOLOGY

**COLLECTION OF DATA:** Data was collected through all Government and Government approved wrestling academies of Haryana.

**STUDY DESIGN:** Survey method

**SAMPLING METHOD:** Convenience sampling

**INDEPENDENT VARIABLES:** Wrestling academies

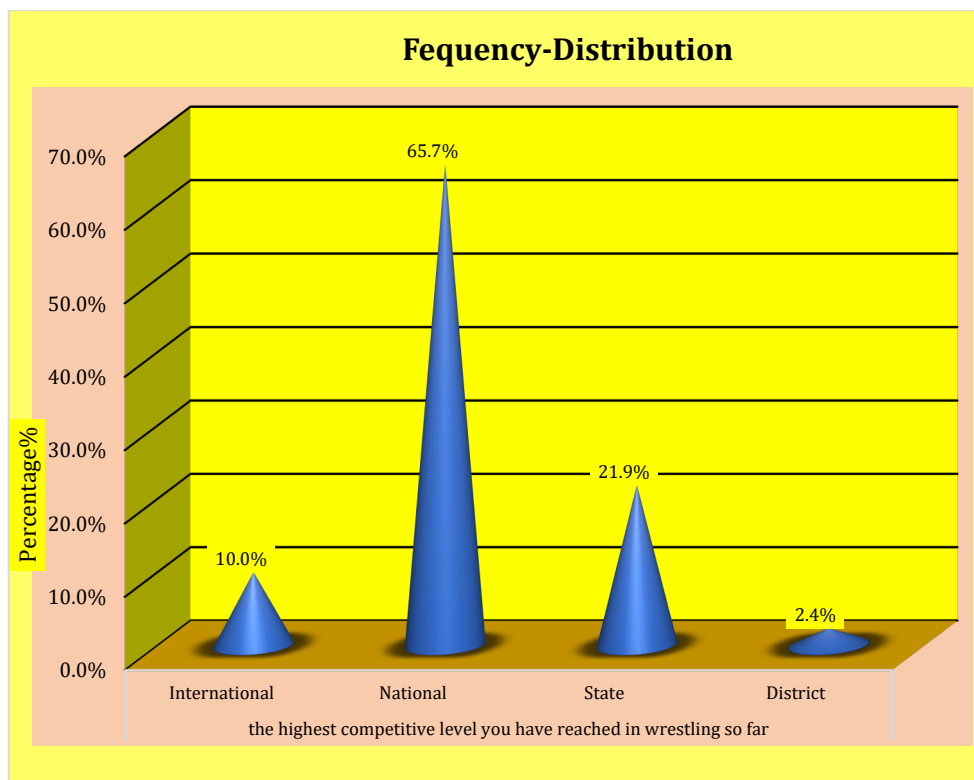
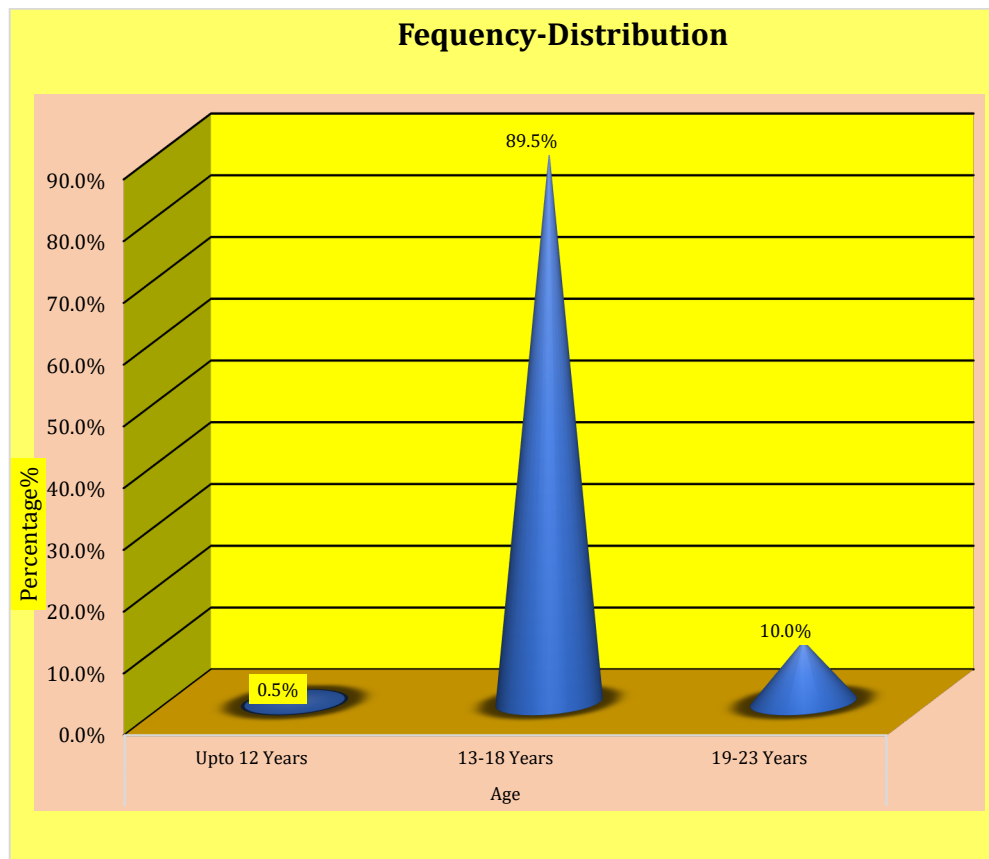
**DEPENDENT VARIABLES:** Wrestlers and available facilities

## 4. RESULT AND DISCUSSION

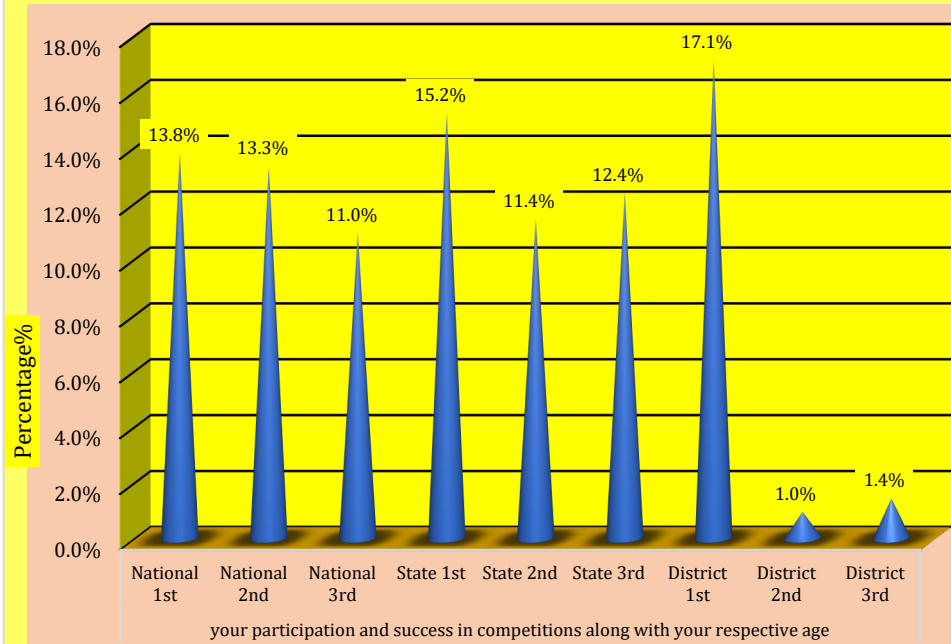
**Demographic table:**

		Percentage
Age	Up to 12 years	0.5%
	13-18 years	89.5%
	19-23 years	10.0%
Sex	Male	67.6%
	Female	32.4%
Height	Upto140 cm	1.0%
	141-150cm	10.5%
	151-160 cm	23.3%
	161-170 cm	63.8%
	>170 cm	1.4%
Weight	Up to 45 kg	0.5%
	46-60kg	41.9%
	61-75 kg	49.0%
	76-90 kg	8.6%
BMI	Underweight	0.0%
	Normal	53.3%

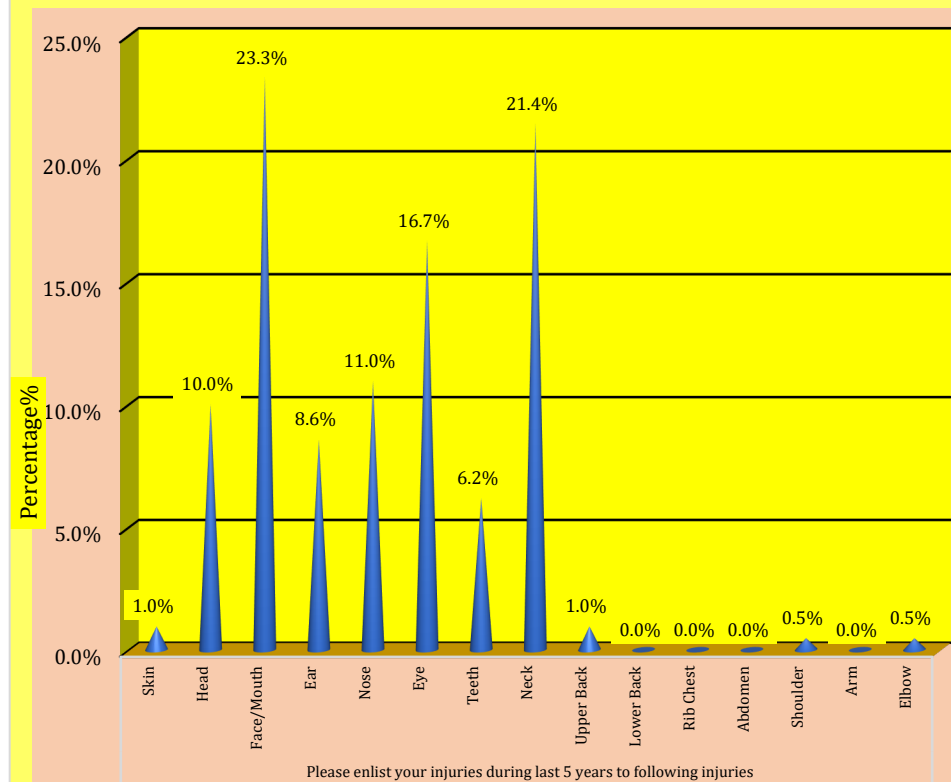
	Overweight	39.5%
	Obesity Class 1	4.3%
	Obesity Class 2	2.9%



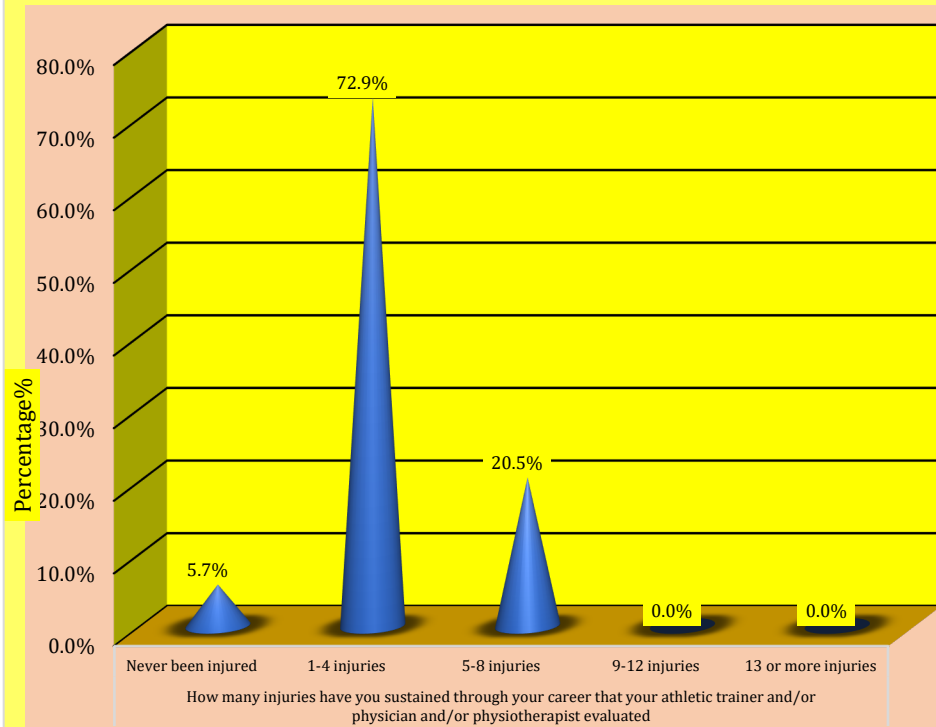
### Fequency-Distribution



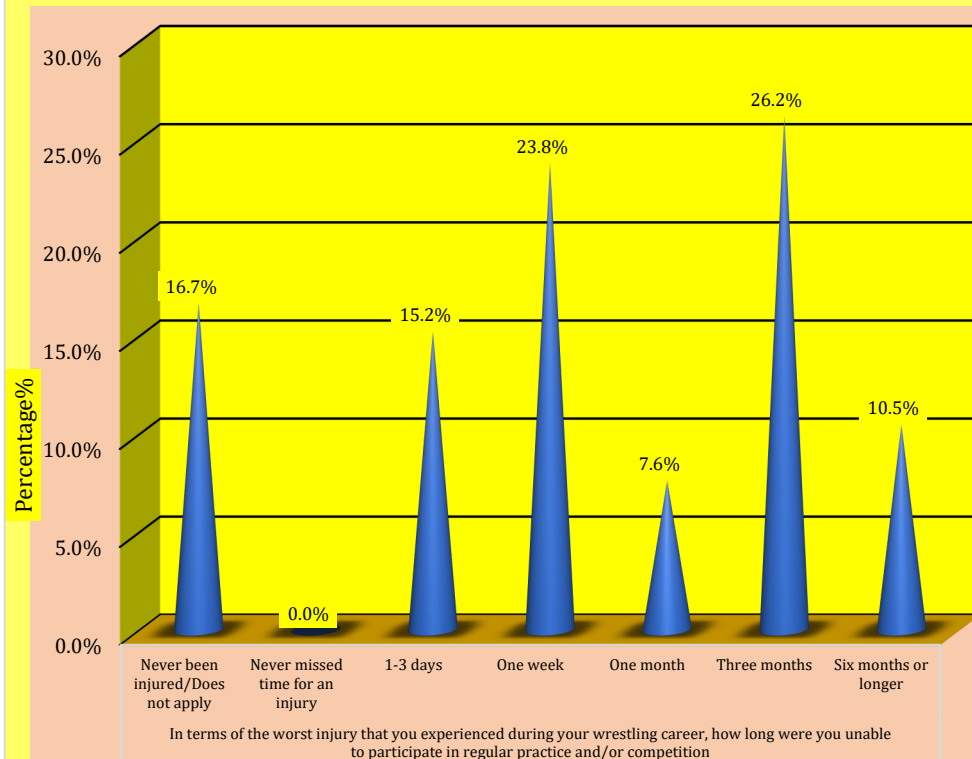
### Fequency-Distribution

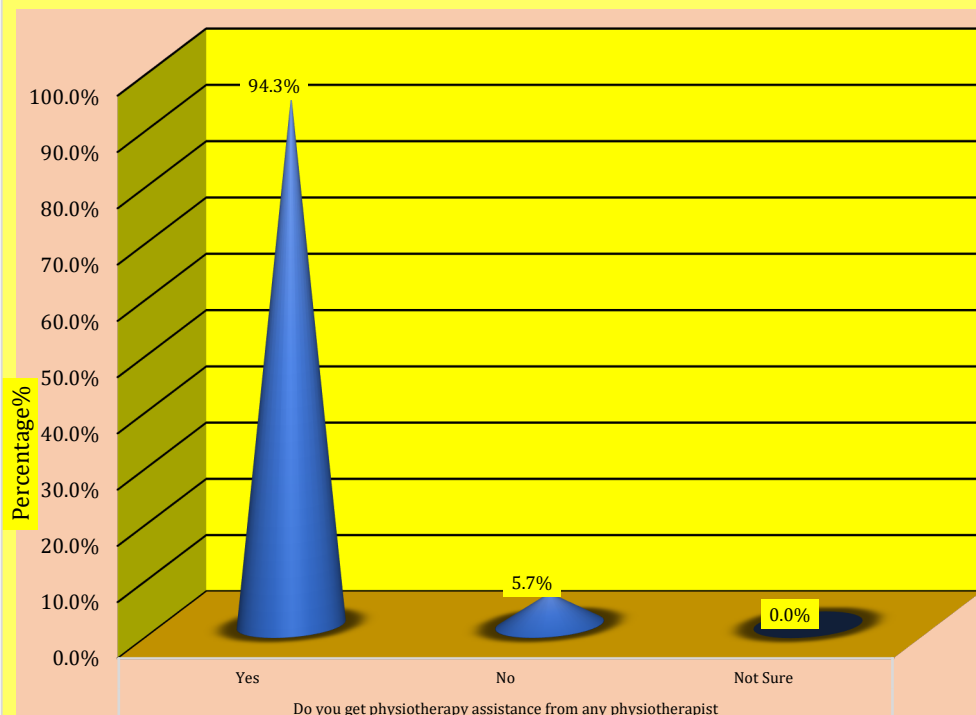
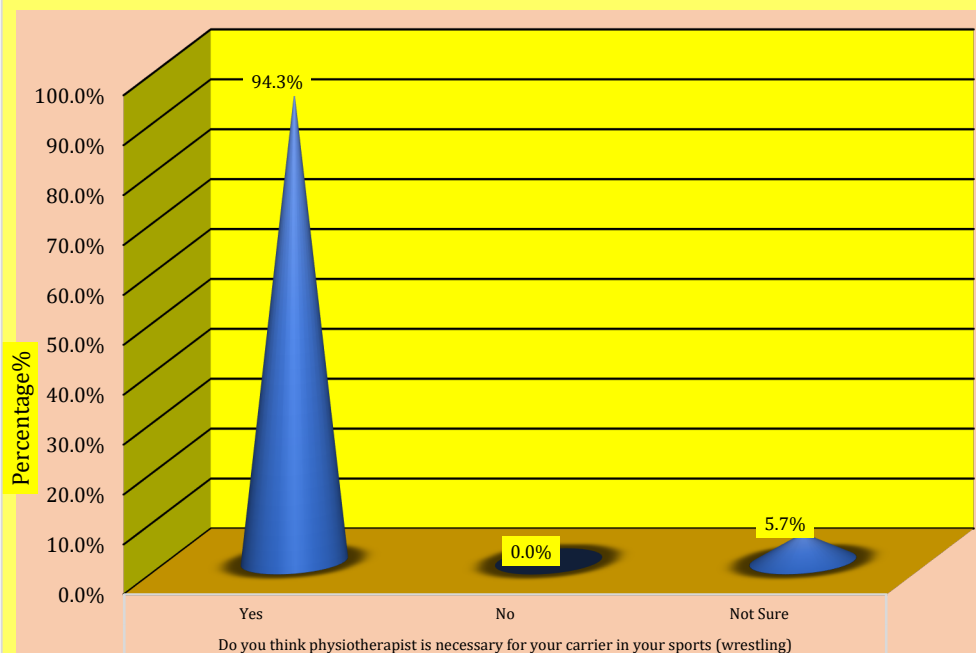


### Frequency-Distribution



### Frequency-Distribution



**Fequency-Distribution****Fequency-Distribution****5. DISCUSSION**

The study is being conducted to explore the current scenario and resources for wrestlers and their performance in Haryana state. The study is ongoing which has to recover all the government approved wrestling academies in Haryana. In this paper, only 7 Districts are covered i.e., Rohtak, Jhajjar, Bhiwani, Dadri, Sonipat, Jind and Rewari. Remaining 16 districts are yet to be covered. From current study we concluded that most of the players(wrestlers) came into their



career as wrestling in 9 to 12 years of age (44.3%). Out of them 67.6% are male and remaining 32.4% are females of Haryana. From current study only 10% of the players have reached up to international level while 65.7% of among them have played the national games, 21.9% of players have played state games and only 2.4 % of them have played district level game. Out of them they have achieved 13.8% medals at national level, 15.2% medals at state level and 17.1% medals at district level.

11.4% of players are practicing in current academies since up to 2 years under a well-qualified and trained coach. 83.8% of players are practicing in current academies since 3 to 6 years and 4.8% of them are practicing in current academies from 7 to 10 years.

From all players 99.5% say that they get all necessary sporting equipments properly in their academies while 0.5% are not sure about this. 0% say no to get all necessary sporting equipments properly in their academies. Out of them 91.9 % wrestlers say yes to planning of facilities and 8.1% of them are not sure about this.

86.7% of wrestlers think that facilities are being changed or repaired accordingly while 13.3 % of them say not sure. Out of them 80.5% say that they get active support by Government for facilities. Only 12.4% of them are not sure that they get active participation by Government in receiving facilities and 7.1% of them say no to receive all the facilities by Government.

33.8% of players sleep for only 5 to 6 hrs, 47.1% among them sleep for 6 to 8 hours and 19 % say that they sleep for 8 to 10 hrs in night time. While in day time 60.5% of players sleep for 1 to 2 hrs and 39.5 % of them sleep for 2 to 3 hours. 38.6% of all wrestlers are vegetarian, 26.2 % of them are nonvegetarian and remaining 35.3 % are ova-vegetarian. get all necessary sporting equipments properly in their academies.

78.1% take milk in the morning, 28.1% take juice. 5.7 % miss breakfast ,55.7 % miss lunch and 38.6% among them miss dinner. Out of these mostly (41.9%) of them miss twice a week. 89% of wrestlers take supplements out of which 71.9% take protein and 13.3 % of them take vitamin supplements.

### **PHYSIOTHERAPY SERVICES:**

90.5% of wrestlers say that there is no physiotherapist available during training sessions, only 9.5% of them say yes to physiotherapy services available during training sessions. Out of them only 9.5% of wrestlers say that there is a physiotherapist available and he/she actively participate during training sessions and 4.3 % of them say that physiotherapist is available but he does not participate in training sessions.

Out of the physiotherapist who actively participate, 1.4% is available for 2hours, 2.4 % of them are available for 3 hours and 5.7 % are available for more than 3 hours.

### **INJURIES AMONG WRESTLERS**

Injuries are very common in wrestling. In the current study, players have got many injuries. 1 % of wrestlers got skin injuries, head injuries are about 10.0%, face/mouth injuries are 23.3%, ear injuries are 8.6 %, nose injuries are 8.6%, eye injuries are 16.7 %, teeth injuries are 6.2%, upper back injuries are 1%, shoulder injuries are 0.5 %.

93.8% of wrestlers agree that they have got proper assessment and treatment on time while 6.2 % of them say that they have not got proper assessment and treatment on time.

100% of wrestlers pay themselves for their treatment of injuries and they all are satisfied with their treatment.

72.9 % players got injured for 1 to 4 times, 20.5 % of them got injured for 5 to 8 times and 5.7 % say that they have not yet get injured.

### **SURGERIES**

93.3% of players had never get surgeries and 6.7% got surgery for one time.

### **REST/INTERVALS BETWEEN TRAINING**

16.7% wrestlers have never been injured i.e they never missed training or practice, 15.2% of them missed their regular practice for 1 to 3 days, 23.8% of them missed their practice for one week, 7.6% of them missed their practice for one month, 26.2% of them missed their practice for 3 months and 10.5% of players of them missed their practice for 6 months or longer.

Out of all 94.3% of the wrestlers get physiotherapy assistance from any physiotherapist and only 5.7 % of them have not get physiotherapy from anywhere.



Out of all 94.3% of the wrestlers think that physiotherapist is necessary for your carrier in sports and physiotherapy involvement in training of wrestlers will enhance their performance in sports. Only 5.7 % are not sure about this

## 6. CONCLUSION

The primary purpose of the study was to find out the current scenario and resources of wrestlers of Haryana state. The overall result of the study showed a significant lack of physiotherapy services. The study also shows that physiotherapist is necessary for your carrier in sports and physiotherapy involvement in training of wrestlers will enhance their performance in sports

## CONFLICT OF INTERESTS

None.

## ACKNOWLEDGMENTS

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## REFERENCES

- Akbarnejad A, Sayyah M. Frequency of sports trauma in elite national level Greco-Roman wrestling competitions. *Arch Trauma Res* 2012; 1:51-3.
- Barroso BG, Da Silva JM, Garcia AD, Ramos NC, Martinelli MO, Resende VR, et al. Musculoskeletal injuries in Wrestling Athletes. *Acta Ortop Bras* 2011
- Bucher A.C. & Krotec, et al (2002) Management of Physical education and sports (12th Ed.) New York: Mc Graw Hill.
- Bucher A.C. & krotte et al (2002) Management of Physical Education Programmes Including Athlete. (7th Ed.) St. Louis: The C.V. Mosby Company.
- Callan SD, Brunner DM, Devolve KL, Mulligan SE, Hesson J, Wilber RL, Kerney JT. Physiological profiles of elite freestyle wrestlers. *J Strength Cond Res* 14: 162–169, 2000.
- Fédération Internationale De Lutte Association (FILA). International Wrestling Rules. Available at: [https://unitedworldwrestling.org/sites/default/files/media/document/wrestling\\_rules.pdf](https://unitedworldwrestling.org/sites/default/files/media/document/wrestling_rules.pdf). Accessed March 2016.
- Hinton PS, Sanford TC, Davidson MM, Yakushko OF, Beck NC. Nutrient intakes and dietary behaviors of male and female collegiate athletes. *Int J Sport Nutr Exerc Metab.* 2004; 14:389–405.
- Horswill CA. Applied physiology of amateur wrestling. *Sports Med* 14: 114–143, 1992.
- Jonathan Q, Selorm A et al Athletes' expectations about physiotherapy in sports injury rehabilitation in greater Accra region, 2019
- Karnincic H, Tocilj Z, Uljevic O, Erceg M. Lactate profile during Greco-Roman wrestling matchx. *J Sports Sci Med* 8: 17–19, 2009.
- McMurray R. G., Proctor C. R., Wilson W. L. Effect of caloric deficit and dietary manipulation on aerobic and anaerobic exercise. *Int. J. Sports Med.* 121991167172

- Murray DG. High school injury surveillance systems. In: *Proceedings of Sports Injuries in Youth: Surveillance Strategies*. Bethesda, MD: National Institutes of Health; 1991.
- Papadopoulou SK, Papadopoulou SD, Gallos GK. Macro- and micro-nutrient intake of adolescent Greek female volleyball players. *Int J Sport Nutr Exerc Metab*. 2002; 12:73–80.
- Pappas E: Boxing, wrestling, and martial arts related injuries treated in emergency departments in the United States, 2002-2005. *J Sports Sci Med*, 2007, 6: 58–61