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Research Article

Awareness of Sessional Injuries During Workout in Gym

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ABSTRACT

Introduction: Sessional injuries comprise of various injuries like muscle tear, muscle pull etc. It comprises of gym related injuries. Performing strenuous exercise and inadequate use of gym equipment's leads to injury. The sites common for injury are shoulder, foot and back.

Aim: To find the awareness of sessional injuries during workout in gym.

Methodology: Questionnaires were distributed to 152 participants in Karad city. Descriptive data regarding the awareness of sessional injuries in gym members and risk factors were collected.

Result: A total of 152 responses were collected for the questionnaire. The participants included were between the age group 18 to 50 years of age. Males and females both were included.

Conclusion: The conclusion of awareness among people was more than predicted to be. It was found that most of the participants were aware about the various sessional injuries. But this awareness definitely gives prevention measures to various risk factors and the other factors leading to the injuries during workout.

Keywords: Awareness, Sessional Injuries, Workout, Gym.

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INTRODUCTION

Sessional injuries comprise of various injuries like muscle tear, muscle pull etc. [1] People with diabetes, BP, and any heart related diseases should do normal exercise. They should not put any over pressure. [1] It comprises of gym related injuries related to bones and muscles. [2] Performing strenuous exercise and inadequate use of gym equipment's leads to injury. [3] The sites common for injury are shoulder, foot and back. [3] Physical activity provides various long term health benefits and hence preventing from any chronic diseases. [3] One should consume adequate amount of nutrition mostly protein and proper hydration to keep up the energy levels. [3] Over consumption of protein can lead to dehydration and other health issues. [3] Awareness should be made in people about gym related injuries.

It is believed that doing stretching before exercise helps in reducing the risk of injury. [5] Incorrect postures or movements are often cause of injury. [6] Males are at a greater risk for

injuries than Females, as they perform more complex exercises. ^[7] The rates of injuries differ from trainer to trainer. ^[8] Fatigue maybe a big reason for injuries to happen in the gym. ^[9] Cross fit exercise is a high intensity aerobic exercise. ^[10] The injury incidence is high due to cross fit exercises. ^[10]

Physical activity enhances the cardiovascular endurance, bones and muscles strengthening, boosting of immune system, balance and mobility is improved, posture is improved. [13] More awareness of injuries was found in the people who were doing barbell or lifting weights, cardio workout training. [14] The people who are more flexible or least flexible are more prone to injuries than those with moderate flexibility. [15] Smoking and drinking alcohol are a major risk factor. [16]

INCLUSION: -

- 1. Adults aged 18 years to 50 years.
- 2. Duration spent during workout in gym.
- 3. Both gender participants who agree to participate.

EXCLUSION: -

- 1. Gym injuries those are not related to training.
- 2. Participants with any musculoskeletal disorders.
- 3. Participants who are below the age of 18 years or above the age of 50 years.
- 4. Participants taking steroids.
- 5. Participants not willing to participate.

PROCEDURE

- a) This will be a study of awareness of sessional injuries during workout in gym.
- b) The study will be conducted in karad.
- c) Certification will be taken from protocol committee. Then permission will be taken from authorities and ethical committee.
- d) Patients will be selected according to inclusion and exclusion criteria.
- e) Informed consent will be taken and data will be collected.

- f) A structured questionnaire will be circulated among the patients for data collection.
- g) Based on collected data the statistical analysis will be done.
- h) And with the collected data the result was made.

STATASTICAL ANALYSIS AND INTERPRETATION

A total of 152 responses were collected for the questionnaire. The participants included were between the age group 18 to 50 years of age. Most of the participants were Females (67.4 %). More than half of the participants were between the age group 19 to 22 years. Out of that only 3 % people visited gym regularly, all 7 days a week. In these, 95.4 % population spends 1 to 2 hours in gym doing exercises. In these 47.1 % people haven't assigned a gym trainer for themselves at the gym. Out of all the responses only 17 % of the people follow the diet plan advised by the gym trainer.

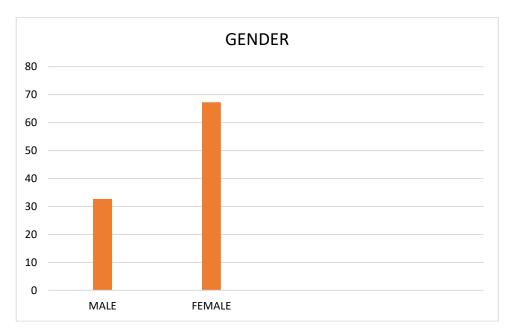


Table no. 1

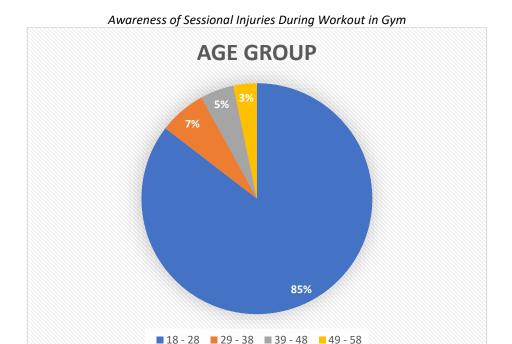
GENDER	TOTAL NO.	PERCENTAGE
MALE	50	32.7 %
FEMALE	102	67.4 %

Interpretation:

Most of the participants are Female in the list. Out of 152 participants, 50 (32.7 %) participants were Male and 102 (67.4 %) participants were Females.

AGE	TOTAL NO.	PERCENTAGE
18 – 28 YEARS	131	85.6 %
29 – 38 YEARS	10	6.6 %
39 - 48 YEARS	7	4.7 %
49 - 58 YEARS	5	3.3 %

Table no. 2

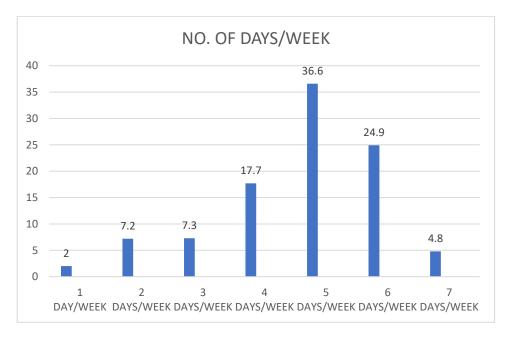


Interpretation:

Most of the participants were between 18 to 28 years of age. 131 (85.6 %) participants of this age. Almost 10 (6.6 %) participants in 29 to 38 years of age. And 7 (4.7 %) participants in 39 to 48 years of age. And 5 (3.3 %) participants in 49 to 58 years of age.

NO. OF DAYS/WEEK	TOTAL NO.	PERCENTAGE
1	3	2 %
2	11	7.2%
3	11	7.2 %
4	27	17.7 %
5	56	36.6 %
6	38	24.9 %
7	6	4.7 %

Table no. 3



Interpretation:

Out of all the participants, most of the participants go to gym 5 days/ week. 3 (2 %) participants go to gym 1 day a week. 11 (7.2 %) participants go to gym 2 and 3 days a week. 27 (17.7 %) participants go to gym 4 day /week. Almost 56 (36.6 %) participants go to gym 5 days a week. And then 38 (24.9 %) participants go to gym 6 days a week. And 6 (4.7 %) participants go to gym 7 days a week.



Table no. 4

NO. OF HOURS SPENT IN GYM	TOTAL NO.	PERCENTAGE
1 TO 2 HOURS	145	95.4 %
3 TO 4 HOURS	7	4.6 %

Interpretation:

Out of the total participants 145 (95.4 %) participants spend 1 to 2 hours doing the gym. And 7 (4.6%) participants spend 3 to 4 hours doing the gym.

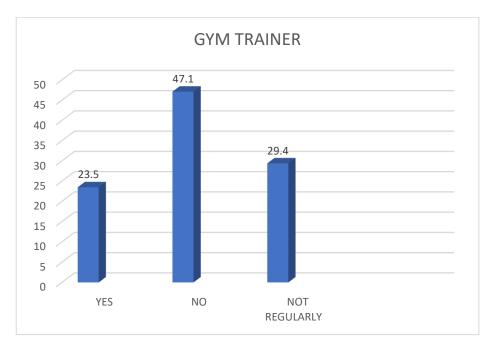


Table no. 5

GYM TRAINER	TOTAL NO.	PERCENTAGE
YES	36	23.5 %
NO	71	47.1 %
YES BUT NOT REGULARLY	45	29.4 %

Interpretation:

Most of the participants, 36 (23.5%) participants have assigned a gym trainer for themselves regularly. Almost 71 (47.1%) don't have a gym trainer assigned for themselves in the gym. And 45 (29.4 %) participants have assigned a gym trainer for themselves but not regularly.

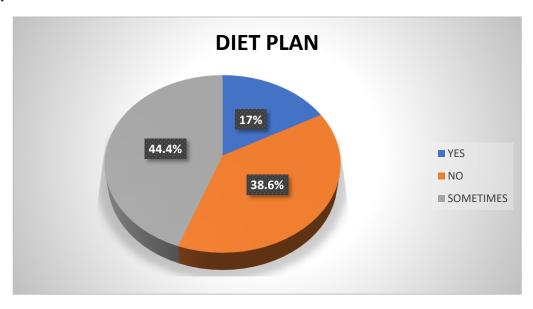


Table no.6

1000			
DIET	PLAN	TOTAL	PERCENTAGE
FOLLOWED		NO.	
YES		26	17 %
NO		59	38.6 %
SOMETIMES	ı	67	44.4 %

Interpretation:

According to the obtained result, 26 (17 %) participants follow the diet plan assigned by their gym trainer on regular basis. Almost 59 (38.6 %) participants don't follow the diet plan assigned by their gym trainer. Most of the participants 67 (44.4 %) follow the diet plan assigned by their gym trainer only sometimes.

DISCUSSION

Gym injuries are very common. [3] The injuries range from mild, moderate to severe. [3] The injuries may have a negative impact on one's mind in enjoyment and participation in various activities. [3] It's impact may affect the long term health benefits. [3] Theses injuries hamper the activities of daily living of the participant leading to poor quality of life. [3] In case, the injury is severe or critical, it may even lead to death of the patient. [3] Therefore, in this study we aimed to study the awareness of sessional injuries during workout in gym. [3] It was seen that most of the people are aware about the injuries caused during workout in the gym. [3]

Most of the participants were Females (67.4 %). More than half of the participants were between the age group 19 to 22 years

Out of that 35.9 % people visited gym 5 days a week and only 3 % people visited gym regularly, all 7 days a week. In these, 95.4 % population spends 1 to 2 hours in gym doing exercises. In these 23.5 % people have assigned a gym trainer for themselves at gym. Out of all the responses only 17 % of the people follow the diet plan advised by the gym trainer.

In the previous studies, it was found that the prevalence of injuries among the gym members was 29.2 %. [3] It was leading to lower quality of life and negative response towards awareness for the same. [3] In this study of "Awareness of sessional injuries during workout in gym" the questionnaire used gave us a positive response towards the same with 140 (92.10 %) out of 152 participants having the awareness. It is also known that following proper diet is necessary for gym workouts. [3] Most of the participants don't follow, risking their health benefits. [3] It causes low back pain, mainly in long standing after doing the workout. [3] Stretching was also a main factor needed for the arise of pain. [5] As it was seen that most of the participants perform stretching after exercises in gym so the level of pain was less. [5]

There are injuries associated with the lack of knowledge about the cause of the injuries. [6] However fitness introduces newer

risks related to exercise related musculoskeletal problems. ^[7] It is also observed that more than the elderly population, young population is more prone to get injured easily. ^[7] These fitness activities can be performed indoors, outdoors or at home. ^[7]

The main category is under strain, sprain injuries. ^[13] Immune system is suppressed if there is no proper intake of diet and protein in the body. ^[13] Doing physical activity regularly also helps in improving the posture, improving the mobility and increasing the flexibility of the participant. ^[13] It was seen that higher number of injuries were occurring in the people doing heavy weight lifting, barbell activities and cardio training. ^[14] Smoking and drinking are one of the major risk factors causing poor health. ^[16] Most people focus on the fitness related to cross fit and heavy weight lifting injuries but forget about the main general fitness population. ^[16]

CONCLUSION

In conclusion, our questionnaire made it possible for us to assess the knowledge of the people related to sessional injuries during workout in gym, related to the adequate warm up before starting the gym, the overuse of various equipment's, about the various health benefits related to doing physical activity and the importance of stretching before and after the completion of gym. The result of awareness among people was more than predicted to be . But this awareness definitely gives prevention measures to various risk factors and the other factors leading to the injuries during workout. Also, there should be all the emergency measures like medical emergencies taken by the gym staff and they should be trained to use it.

REFERENCES

Shinde N, Sahasrabuddhe P. Prevalence of musculoskeletal pain and injuries in gym instructors. Int J Health Sci Res. 2021; 11(4): 62-67. https://doi.org/10.52403/ijhsr.20210408 DOI: https://doi.org/10.52403/ijhsr.20210408

Dieppe P. Chronic musculoskeletal pain. BMJ. 2013 May 16;346:f3146. doi: 10.1136/bmj.f3146. PMID: 23709528.

Alnasser S, Alyamani A, AlDawod I, Almujil A. Prevalence and type of injuries among gym members in Saudi Arabia. Saudi J Sports Med 2022;22:30-7

Knapik JJ, Sharp MA, Canham-Chervak M, Hauret K, Patton JF, Jones BH. Risk factors for training-related injuries among men and women in basic combat training. Med Sci Sports Exerc. 2001 Jun;33(6):946-54. doi: 10.1097/00005768-200106000-00014. PMID: 11404660.

Pope RP, Herbert RD, Kirwan JD, Graham BJ. A randomized trial of preexercise stretching for prevention of lower-limb injury. Med Sci Sports Exerc. 2000 Feb;32(2):271-7. doi: 10.1097/00005768-200002000-00004. PMID: 10694106.

Kemler E, Noteboom L, van Beijsterveldt AM. Characteristics of Fitness-Related Injuries in The Netherlands: A Descriptive Epidemiological Study. Sports (Basel). 2022 Nov 22;10(12):187. doi: 10.3390/sports10120187. PMID: 36548484; PMCID: PMC9786681.

Noteboom, Lisa, Ellen Kemler, Anne-Marie van Beijsterveldt, Marco J. M. Hoozemans, Frans C. T. van der Helm and Ealm Verhagen. "Factors associated with gym-based fitness injuries: A case-control study." *JSAMS Plus* (2023)

Weisenthal BM, Beck CA, Maloney MD, DeHaven KE, Giordano BD. Injury Rate and Patterns Among CrossFit

Athletes. Orthop J Sports Med. 2014 Apr 25;2(4):2325967114531177. doi: 10.1177/2325967114531177. PMID: 26535325; PMCID: PMC4555591.

Elshafei M, Shihab E. Towards Detecting Biceps Muscle Fatigue in Gym Activity Using Wearables. Sensors (Basel). 2021 Jan 23;21(3):759. doi: 10.3390/s21030759. PMID: 33498702; PMCID: PMC7865622.

Larsen RT, Hessner AL, Ishøi L, Langberg H, Christensen J. Injuries in Novice Participants during an Eight-Week Start up CrossFit Program-A Prospective Cohort Study. Sports (Basel). 2020 Feb 13;8(2):21. doi: 10.3390/sports8020021. PMID: 32069804; PMCID: PMC7077206.

Westcott WL. Resistance training is medicine: effects of strength training on health. Curr Sports Med Rep. 2012 Jul-Aug;11(4):209-16. doi: 10.1249/JSR.0b013e31825dabb8. PMID: 22777332.

Prochnow, Tyler, Leslie W. Oglesby, Megan Stiefel Patterson and M. Renée Umstattd Meyer. "Perceived burnout and coping strategies among fitness instructors: a mixed methods approach." *Managing Sport and Leisure* 27 (2020): 484 - 498. Gray SE, Finch CF. The causes of injuries sustained at fitness facilities presenting to Victorian emergency departments - identifying the main culprits. Inj Epidemiol. 2015 Dec;2(1):6. doi: 10.1186/s40621-015-0037-4. Epub 2015 Apr 14. PMID: 27747738; PMCID: PMC5005555.

Knapik JJ, Jones BH, Bauman CL, Harris JM. Strength, flexibility and athletic injuries. Sports Med. 1992 Nov;14(5):277-88. doi: 10.2165/00007256-199214050-00001. PMID: 1439396.

Heir T, Eide G. Injury proneness in infantry conscripts undergoing a physical training programme: smokeless tobacco use, higher age, and low levels of physical fitness are risk factors. Scand J Med Sci Sports. 1997 Oct;7(5):304-11. doi: 10.1111/j.1600-0838.1997.tb00158.x. PMID: 9338950.

Westcott WL. Resistance training is medicine: effects of strength training on health. Curr Sports Med Rep. 2012 Jul-Aug;11(4):209-16. doi: 10.1249/JSR.0b013e31825dabb8. PMID: 22777332.