COUSTEMER SATISFACTION ON THE RISK OF EQUIPMENT PROVIDED IN GYMNASIUM

VIMALAN S/O PALANIAPPAN

OPEN UNIVERSITY MALAYSIA
2021

COUSTEMER SATISFACTION ON THE RISK OF EQUIPMENT PROVIDED IN GYMNASIUM

VIMALAN S/O PALANIAPPAN

A Master's Project submitted in fulfilment of the requirements for the degree of Master of Project Management

OPEN UNIVERSITY MALAYSIA

2021

DECLARATION

Name: Vimalan a/l Palaniappan

Matric Number: CGS 01974217

I acknowledge that this research paper is the result of my own work unless external materials are used, each of which I have explained its source. This research paper was also made to meet the award requirements for the MASTER program that I followed.

Signature: Date: 10/04/2021

COUSTEMER SATISFACTION ON THE RISK OF EQUIPMENT PROVIDED IN GYMNASIUM

ABSTRACT

Some people believe that the gym is the best place to work out consistently. There is no denying that this opinion is very true as this opinion is given in gyms, from the aspect of equipment like fitness machines (weight training and cardio) used in gyms, like treadmills and weights, require periodic maintenance for user safety. This study aimed to assess customer satisfaction on the risks of equipment provided in the gymnasium. A risk assessment form from the HIRARC DOSH (2008) guidelines was used to calculate risk in the gymnasium and a questionnaire form was used to collect data on customer satisfaction regarding equipment, training and physical environment in fitness facilities from 105 respondents. Questionnaire data were analyzed using SPSS Version 25. The main results of the findings found differences in the level of risk between the gyms studied. The position of gym equipment and the cleanliness of gym equipment can pose a danger to gym users. The overall conclusion of the study found that most of the gyms in the district of Tampin Negeri Sembilan are moderate risk and there are also gyms with high risk.

Keywords: Safety, Fitness center, GYM equipment, Hazards, Risk Assessment

KEPUASAN PELANGGAN TERHADAP RISIKO PERALATAN YANG DISEDIAKAN DI GYMNASIUM

ABSTRAK

Sebilangan orang percaya bahawa gimnasium adalah tempat terbaik untuk bersenam secara konsisten. Tidak dapat dinafikan bahawa pendapat ini sangat benar kerana pendapat ini diberikan di gimnasium, dari aspek peralatan seperti mesin kecergasan (latihan berat dan kardio) yang digunakan di gimnasium, seperti treadmill dan berat, memerlukan penyelenggaraan berkala untuk keselamatan pengguna. Kajian ini bertujuan untuk menilai kepuasan pelangggan terhadap risiko peralatan yang disediakan di gymnasium. Borang penilaian risiko dari garis panduan HIRARC DOSH (2008) digunakan untuk mengira risiko di gimnasium dan borang soal selidik digunakan untuk mengumpulkan data mengenai kepuasaan pelanggang mengenai peralatan, latihan dan persekitaran fizikal di kemudahan kecergasan daripada 105 responden. Data Soal selidik telah dianalisis menggunakan SPSS Versi 25. Hasil utama penemuan mendapati perbezaan tahap risiko antara gim yang dikaji. Kedudukan peralatan gim dan kebersihan peralatan gim boleh mendatangkan bahaya kepada pengguna gim. Kesimpulan keseluruhan kajian mendapati bahawa kebanyakan gimnasium di daerah Tampin Negeri Sembilan adalah berisiko sederhana dan juga ada gimnasium mepunyai resiko tinggi.

Kata kunci: Keselamatan, Pusat kecergasan, peralatan GYM, Bahaya, Penilaian Risiko

ACKNOWLEDGEMENT

Too many individuals I would like to thank and thank, but I start with a million words of thanks to the main supervisor, MURUGAN S / O SUBRAMANIAM for all the guidance given. Without the help, support and encouragement from him, the journey to complete this thesis would have been very difficult.

I also would like to express my appreciation to my family and friends for their endless support whenever I face problems. Without the mentioned parties, it is impossible for me to complete this project report successfully. This thesis is very difficult to complete if there is no help from the respondents and research informants who are willing to spend time them to enable the data and information collection process to be carried out. Therefore, I would like to express my deepest appreciation and thanks to all the respondents of this study who consist of gym users in Tampin, Negeri Sembilan.

The helpful gym staff are also greatly appreciated and thank you to all who are directly and indirectly involved in this research. Your services are greatly remembered and thank you. Many thanks to all parties directly and indirectly involved in helping to complete this research.

THANK YOU

VIMALAN S/O PALANIAPPAN

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

Gym	Gymnasium
RR value	Relative Risk
HIRARC	Hazard Identification, Risk Assessment and Risk Control
DOSH	Department of Safety and Health
Kg	Kilograms
Ibs	Pounds (weight)
MSDS	Material safety data sheet
WERA	Workplace Ergonomic Risk Assessment
etc.	used at the end of a list to indicate that further, similar items are included
UiTM	University Technology MARA
DMG	Dimethylglyoxime test
NIOSH	National Institutes of Occupational Safety and Health
NZIHF	New Zealand Institute of Health and Fitness
e.g.	example *(Latin exempli gratia)*

CHAPTER 1

INTRODUCTION

1.1 Research Background

Some people think the gym is the best place to exercise consistently. There is no denying that this opinion is very true as the facilities in the gym are adequate, from the aspect of equipment such as machines (weight training and cardio), dressing facilities, to technical aspects such as personal training and physiotherapy. Fitness equipment used in the gym, such as treadmills and weight machines, requires periodic maintenance for the safety of users.

Fitness facility safety policy is about the maintenance of equipment to improve function as well as safety. Access to a quality gymnasium can be a key factor in the ability to meet the current demands of consumers and plan for future growth. Good management of facilities is very important especially in encouraging consumer involvement in sports.(Castro et al., 2015).

Gym Equipment or 'Exercise Machine' refers to the equipment used in doing exercise or physical training. The main function of this tool is to give pressure (resistance) to the body to receive resistance based on the appropriate load in undergoing physical training. Each equipment is specially designed for the suitability of a physical training activity and the load can be adjusted according to the suitability of the user. Some of the exercise equipment that we often see on television or fitness centre (gym) are fitness training equipment and weight training equipment. These devices vary in their use either at home or in the gym(Tent, 2008).Fitness training equipment or better known as cardio equipment is specially

Designed to put pressure in the form of repetitive movements and using distance and time systems. Fitness Training tools have a greater impact on the cardiovascular or respiratory systems. Specially designed to function according to basic human movements. Among the examples of cardio equipment that we often see are such as Treadmill, Bicycle or Bike (Recumbent, Upright, Spinning) and Elliptical (cross trainer). users. Using a weight measurement system (kg / lbs) as an indication of weight training. Using the concept of user traction pulls the stack weight against gravity. Most weight training tools use pins to lock the 'stack' weight as needed, but there are also tools that use a weight plate (Weight Plate Loaded Machine). In general, it is divided into two categories, namely Single Station and Multi Station.

As gym equipment can cause injury to the user if not in accordance with proper risk management. This risk assessment can help reduce accidents that occur in the Gym. Before proceeding it is also necessary to know what risk assessment is.

Risk Assessment is essential for identifying, assessing risks and evaluating existing risks. Risk Assessment is an assessment to assist or evaluate an agency or organization in assessing the risks faced or to be faced, the ability to control and monitor existing risks and minimize the impact of those existing risks. Risk is something that will happen either now or in the future, risk can result in losses for those who suffer from it. The losses faced are also very diverse and unpredictable. So before taking the risk must prevent it, and after experiencing the risk an evaluation or assessment of the risk.(Mane & Pimplikar, 2013)

Risk Assessment must also be regulated and have certain stages. Risk Assessment has 5 stages namely: Identify, classify and find potential hazards that exist and are classified according to the type of hazard, know the consequences or impacts of the hazards and know how the hazards occur, evaluate or repair existing risks, record all available findings and evaluate or review the results of the risk assessment and make an evaluation. With Risk Assessment, places that have a Risk can assess the Risk to be faced based on the frequency of Risk occurrence.

Risk Assessment can help reduce consumer injury. the risk in the gym is even more dangerous as it involves overweight iron. this study will further discuss the correct standards for equipment alignment, risk control and place management.

1.2 Problem Statement

Every day people are more aware of the importance of taking care of themselves and living a healthy lifestyle based on a balanced diet and regular physical exercise. The reason why gyms and sports centres have undergone significant recovery in recent years, as evidenced by the Annual Statistics of Sports Statistics conducted by the Ministry of Sports, according to which 46.6% of Spaniards do some type of sports activity every week (Podlog et al., 2011).

Very encouraging facts show that health and well-being is a priority for the majority of the population. The benefits of sports for health are undeniable both mentally and physically. However, heavy space can be a 'hostile territory' if we do not have safe facilities to conduct training. Inexperienced, not knowing the operation of the machine or not knowing the proper technique while performing certain exercises can play tricks on us and cause injury. For this reason, knowing the risks we are exposed to can help in avoiding them as much as possible.

Exercise Machine or 'Exercise Machine' refers to the equipment used in doing exercise or physical training. The main function of this tool is to give pressure (resistance) to the body to receive resistance based on the appropriate load in undergoing physical training. Each equipment is specially designed for the suitability of a physical training activity and the load can be adjusted according to the suitability of the user. Some of the exercise equipment that we often see on television or fitness centre (gym) are fitness training equipment and weight training equipment. These devices vary in their use either at home or in the gym.

The purpose of choosing this title is where the gymnasium is now an important convenience for exercise, because of the facilities provided in the gymnasium. with gym equipment and environment8m will be the choice of the user. This study will focus on the position of the appropriate equipment, the cleanliness of the gym equipment in the

gymnasium. Several studies have been conducted where negligence and low risk management can cause injury to gym users. Through the results of the study can produce a method of gym risk management suitable for gyms in Tampin, Negeri Sembilan.

The community's involvement in sports today is very encouraging and its participation is increasing and at the same time a challenge in the world of sports. Sport is an important factor in life and is a major need for every individual. With sports it is completely helpful improving the fitness level of each individual and fitness is also a major factor in achieving satisfaction in sports(Coleman, 2019). Injury is something that can happen to every living thing whether consciously or not.

There are two categories of injuries namely internal injuries and external injuries. Internal injuries require specialist skills to be identified and require sophisticated equipment. It usually occurs in the body such as the implications of the heart, liver, lungs and so on. While external injuries can be identified by using only the naked eye for confirmation. In addition, these external injuries may be seen through their effects.

Examples are bleeding, swelling and bruising. Therefore, everyone who wants to play sports should focus on safety aspects because in sports, injuries can always occur. Every athlete who plays sports is always prone to injuries whether serious injuries such as fractures, internal bleeding, coma and may cause death. For common injuries such as swelling, bruising, bleeding wounds, and fainting will definitely threaten the performance of an athlete. Therefore, while a user is training has the implications of significant injuries to the body can not only endanger safety but can also be fatal to the user. There is no denying that every type of sport involved has its own risks of injury.

Gym equipment needs proper positioning. For example, if the treadmill is located too close to the wall, someone who falls off the belt can hit the wall, causing injury. Safety of equipment should be a priority so that user risk can be reduced at the fitness centre.

However, it is important that this facility has an effective strategy to reduce the risk of injury to their customers (Zhang et al., 2016)

Researchers from South Korea (South Korea) warn that there is a high risk of COVID-19 infection in indoor places such as fitness centres or gyms. In a report published in the journal Emerging Infection Disease, researchers in South Korea saw an emergence of cases from dance studios. Today every gym must adhere to health protocols such as providing hand washing facilities or hand sanitizers and always disinfect the room to be free of the Corona virus. (Park et al, 2020)

1.3 Research Objective

1.3.1 General objective

To evaluate Risk assessment for gym equipment in Negeri Sembilan.

1.3.2 Specific objective

1) To identify all the possible hazards in all the gymnasium in Negeri Sembilan
2) To assess equipment position and equipment safety among gym user Negeri Sembilan.
3). To assess hygiene of equipment and gymnasium environment among the gym users Negeri Sembilan.

1.4 Research Questions

In this study will be listed some related questions as follows;

1) What are the possible hazards in all the gymnasium in Negeri Sembilan?
2) What are gymnasium equipment position and equipment safety in Negeri Sembilan?
3). What are the hygiene of equipment and gymnasium environment among the gymnasium in Negeri Sembilan?

1.5 Significance of the Research

Gymnasium safety is a state of being safe, prosperous, peaceful and protected from any physical problems, threat of disease, dirty atmosphere and other things that could involve damage or untoward incidents occur. Safety in the gymnasium school to the prevention of any cases of injuries and accidents in all places within the gymnasium area such as in the free load area, training machines and walkways as well as toilets.

In order to prevent any unwanted accidents from happening, preventive measures must be planned, compiled and implemented in detail for the common good of all school people. Therefore, a process of safety procedures on the procedures for the use of something four should be disseminated and presented in the form of pamphlets or posters. These procedures include in terms of the use of equipment in general, the procedure of cleaning gym equipment.

With this procedure, the gym administration will have a commitment in providing awareness on the safety aspects of the gym so that users can carry out safe exercise activities. several studies have been conducted on gym safety as follows; The Australian Fitness Industry Risk Management (AFIRM) has also stressed the operation of the gym's rules and regulations as well as the gym's risk management for the safe delivery of fitness services. Australian Fitness Industry Risk Management Manual, provides management methods and risk assessment in terms of equipment management as well as the gym environment. Standards Australia. (2010).

In addition to Australia, another study on risk assessment in gyms was conducted by NZIHF, 2007 has listed methods of maintaining safety in the gym. With the results of this study can get the cause of danger that occurs in the gymnasium as well as actions to prevent accidents and injuries in the gymnasium in the area of Tampin, Negeri Sembilan

1.6 Definition of Terms

There are several important terms that are often used in this study. The term needs to be clarified so that the purpose of this research is successfully conveyed. In accordance with the purpose of the study conducted, the following explains the definition of operations and important terms found in this study.

- Risk

Risk has many meanings and is always considered to have a negative impact on anyone, where and how it exists. Risk is with respect to the possibility or danger of loss of doing something regardless of the possibility of that danger. Risk can also be termed as relating to quantitatively measurable probabilities. Risk is the exposure to an uncertainty (Mohd Hashim et al., 2019).

- Risk Assessment

Risk assessment is different from risk analysis or risk management, but between the three there is an interrelated relationship with each other. Self-analysis of analytical activities to determine the magnitude of a risk by considering the likelihood of occurrence and the magnitude of the consequences.

After analysing the existing risk and previously identifying the risk as to what will happen and how it can happen then the next stage provides an assessment of the magnitude of the risk-related level. It is part of the risk assessment itself which gives meaning to an identified hazard to give an idea of how big the risk is. So that further action can be taken against the identified hazards, whether the hazards are acceptable or not. (DOSH, 2005)

- Gymnasium Equipment

There are various types of physical training tools and equipment available in the market today. Yet what is listed can be said to be among the tools that have the benefit of a good training effect and if possible, should be present in any load room. Generally, load training equipment can be divided into machine category and free-weight category. Some also provide new classifications such as functional training tools and so on, but

for the purpose of this study, it is sufficient to categorize load training equipment only to machines and free-weight (Zhang et al., 2016).

- Safety of Gymnasium

Safety of gym equipment This depends on the machine used. For example, on a treadmill, an emergency cable to stop will be mounted on the user's shirt. In a weight lifting machine, make sure the weight pin is inserted to maintain the weight. Be careful of any leaks on the cable holding the weight. At free weights, make sure the weight is placed on the bar and does not fall off. (Brady et al., 1982)

- Gym users

Individual gym users who want to start exercising in their daily routine at the gym centre. Among the advantages of exercising in the gymnasium is that it provides a closed and safe place, in fact, for those who are just getting used to exercise activities, the gym provides a variety of aids that can be used depending on their level of ability. (Mohd Hashim et al., 2019)

- Gym Equipment Placement Standards

Fitness facilities and gyms can be very complicated if certain rules and safety are not followed. the position of the equipment should be at the right distance, there should be adequate space and traffic flow and consideration for those who use it. Improper public gym arrangements can result in injury or even death, resulting in a judicial process that can damage the business (Zhang et al., 2016)

- Gym hygiene

The hygiene gym is where the facilities are kept clean by wiping windows and equipment, sweeping and mopping the floor, washing equipment, cleaning bathrooms and toilets, and disposing of garbage. Environmental cleanliness starts with keeping the yard clean and cleaning the space in a gym (Bilung et al., 2018).

- Hazard

Hazard means a cause or a condition that has the potential to cause harm in the form of injury or adverse health to humans, property damage, environmental damage or a combination of any such harm (Rachel Moss ,2016).

- Relative Risk value

Relative Risk (RR) which is often used when studies involve comparing the likelihood, or likelihood, of events occurring between two groups. Relative risk is also considered a descriptive statistic, not an inferential statistic; because it does not determine statistical significance. Relative Risk uses the probability of an event occurring in one group versus the probability of an event occurring in another group. Relative risk also requires examination of two dichotomous variables, where one variable measures events (occurring vs. non -occurring) and the other variable measures groups (group 1 vs. group 2). (DOSH, 2005)

- Customer Satisfaction

Customer Satisfaction refers to the quality of the experience experienced by the customer himself, which is closely related to the needs and expectations of the customer. Usually, customers who go through a good or quality experience, they will feel happy because their needs and expectations can be met. That is one of the signs that they are satisfied. (Mohd Hashim et al., 2019)

REFERENCES

Al-Arja, O.A. Acoustic Environment and Noise Exposure in Fitness Halls. Appl. Sci. 2020, 10, 6349.

Bakri, A., Zin, R. M., Omar, W., & Kuang, L. C. (2008). Hirarc: a Tool of Safety Imporvement in the Construction Industry. *2nd International Conference On Built Environment In Developing Countries (ICBEDC 2008)*.

Brady, T. A., Cahill, B. R., & Bodnar, L. M. (1982). Weight training-related injuries in the high school athlete. *The American Journal of Sports Medicine*. https://doi.org/10.1177/036354658201000101

Bragoszewska, E., Biedroń, I., & Mainka, A. (2020). Microbiological air quality in a highschool gym located in an urban area of Southern Poland-preliminary research. *Atmosphere*. https://doi.org/10.3390/ATMOS11080797

Castro, A., Calvo, A. I., Alves, C., Alonso-Blanco, E., Coz, E., Marques, L., Nunes, T.,

Fernández-Guisuraga, J. M., & Fraile, R. (2015). Indoor aerosol size distributions in a gymnasium. *Science of the Total Environment*. https://doi.org/10.1016/j.scitotenv.2015.03.118

CDC. (2020). Cleaning And Disinfecting Your Facility. *2020*.

Coleman, N. (2019). Sports injuries. In *Pediatrics in Review*. https://doi.org/10.1542/pir.2018-0221

Coleman, N. (2019). Sports injuries. In Pediatrics in Review. https://doi.org/10.1542/pir.2018-0221

DOSH. (2005). Guidelines for Control of Department of Occupational Safety and Health , Malaysia. In Occupatianal Noise.

Gym hazard identification guide. (2017, September 25). NZIHF. https://nzihf.ac.nz/personal-training/gym-hazard-identification-guide/

Gym Risk Assessment V1.0 - Duplicate Checklist – Safety Culture. https://public-library.safetyculture.io/products/gym-risk-assessment-v10-duplicate.

Guidelines for Hazard Identification, Risk Assessment and Risk Control (HIRARC). (2008). Department of Occupational Safety and Health. Ministry of Human Resources Malaysia.

Gumulka, M., Matura, M., Lidén, C., Kettelarij, J. A. B., & Julander, A. (2015). Nickel exposure when working out in the gym. *Acta Dermato-Venereologica*. https://doi.org/10.2340/00015555-1917

Holm, Byron M.D.; Holm, Mary B.S., P.T. Design and Operation of a Medical Fitness Center, ACSM's Health & Fitness Journal: January 2008 - Volume 12 - Issue 1 - p 27-30 doi: 10.1249/01.FIT.0000298475.13866.ba

Jasinskas, E., Reklaitiene, D., & Švagždiene, B. (2013). Evaluation of service quality in fitness centres. *Transformations in Business and Economics*.

Kalinina, N. E., Zhegalova, M. N., Skivko, A. V., & Martynova, E. V. (2019). Monitoring the dustiness of the gymnasium. *E3S Web of Conferences*. https://doi.org/10.1051/e3sconf/201913801032

Mane, S., & Pimplikar, S. (2013). Risk Assessment of Bot Projects I. SCOPE OF RISK ANALYSIS ON BOT PROJECTS II. OBJECTIVES OF RISK ASSESMENT. *International Journal of Computational Engineering Research||Vol*.

Matos, M., & Arezes, P. M. (2015). Ergonomic Evaluation of Office Workplaces with Rapid Office Strain Assessment (ROSA). *Procedia Manufacturing*. https://doi.org/10.1016/j.promfg.2015.07.562

Michaud, P. A., & Michaud, P. A. (2018). Job Hazard Analysis. In *Accident Prevention and Osha Compliance*. https://doi.org/10.1201/9781315136578-6

Mohd Hashim, N. H., Wan Ismail, W. H., Sulaiman, F. R., & Mokhtar, M. A. S. (2019). Determining Indoor Air Quality in Gymnasium for Indoor Recreation Activity at University Teknologi MARA, Shah Alam. *IOP Conference Series: Earth and Environmental Science*. https://doi.org/10.1088/1755-1315/385/1/012034

Mukherjee, N., Dowd, S. E., Wise, A., Kedia, S., Vohra, V., & Banerjee, P. (2014). Diversity of bacterial communities of fitness center surfaces in a U.S. metropolitan area. *International Journal of Environmental Research and Public Health*. https://doi.org/10.3390/ijerph111212544

Murad, M. A. A. bin M. R., Rahman, N. A. A., Rahman, N. I. A., & Haque, M. (2016). Knowledge, attitude and practice regarding exercise among people exercising in gymnasium and recreational parks around Kuantan, Malaysia. *Journal of Applied Pharmaceutical Science*. https://doi.org/10.7324/JAPS.2016.60609

Merrick, Teresa M.A., CSCS/NSCA-CPT, ACSM-HFI®; Bracko, Michael R. Ed.D., CSCS, FACSM Preventing Ergonomic Hazards for Health/Fitness Professionals: Are You Getting Hurt? ACSM's Health & Fitness Journal: May-June 2005 - Volume 9 - Issue 3 - p 8-13

Official Portal of Tampin district council (MDT). (2021, April 12). Official Portal of Tampin District Council (MDT). https://www.mdtampin.gov.my/en

Podlog, L., Dimmock, J., & Miller, J. (2011). A review of return to sport concerns following injury rehabilitation: Practitioner strategies for enhancing recovery outcomes. In *Physical Therapy in Sport*. https://doi.org/10.1016/j.ptsp.2010.07.005

Park Y, Choe Y, Park O, Park S, Kim Y, Kim J, et al. Contact Tracing during Coronavirus Disease Outbreak, South Korea, 2020. Emerg Infect Dis. 2020;26(10):2465-2468. https://doi.org/10.3201/eid2610.201315

Richardson, E. V., Smith, B., & Papathomas, A. (2017). Disability and the gym: experiences, barriers and facilitators of gym use for individuals with physical disabilities. *Disability and Rehabilitation*.https://doi.org/10.1080/09638288.2016.1213893

Riseth, L., Nøst, T. H., Nilsen, T. I. L., & Steinsbekk, A. (2019). Long-term members' use of fitness centers: A qualitative study. *BMC Sports Science, Medicine and Rehabilitation*. https://doi.org/10.1186/s13102-019-0114-z

Sekendiz, B. (2016). RISKS of TREADMILLS in HEALTH/FITNESS FACILITIES: Ready, Steady, Go? *ACSM's Health and Fitness Journal*. https://doi.org/10.1249/FIT.0000000000000216

Standards Australia. (2010). HB 246:2010 Guidelines for managing risk in sport and recreation organizations, pp. 62-63. [handbook] Standards Australia/Standards New Zealand.

Tent, M. (2008). Gymnasium. In *The Prince of Mathematics*. https://doi.org/10.1201/b10646-11

Terziev, V., Sakakushev, B., Parvanov, S., & Georgiev, M. (2020). Occupational Safety and Health Management. *International Conference KNOWLEDGE-BASED ORGANIZATION*. https://doi.org/10.2478/kbo-2020-0042

Yang, X., Huan, M., Abdel-Aty, M., Peng, Y., & Gao, Z. (2015). A hazard-based duration model for analyzing crossing behavior of cyclists and electric bike riders at signalized intersections. *Accident Analysis and Prevention*. https://doi.org/10.1016/j.aap.2014.10.014

APPENDICES

Appendix 1

QUESTIONNAIRE

Questionnaire

RISK ASSESMENT FOR GYMNASIUM IN TAMPIN, NEGERI SEMBILAN

Degree of Master of Project Management

PROJECT TITLE

RISK ASSESMENT FOR GYMNASIUM IN TAMPIN, NEGERI SEMBILAN

Questionnaire Form

(Adapted from New Zealand Institute of Health and Fitness NZIHF ,2007)

VIMALAN S/O PALANIAPPAN

(2021)

Respondent number

Dear Respondent,

It is with great pleasure and honor to merge you all in my study The purpose of this study is to identify the views of fitness industry customers in the area of Tampin, Negeri Sembilan on Risk assessment related to equipment, training and physical environment in the fitness facility. This is absolutely an academic study is undertaken to achieve the requirement of the Master of Project Management at Open University Malaysia.

Please complete the questionnaire based on your correct opinion. There are no complicated questions and thick the correct answers. The information collected will be checked secretly. Moreover, this information is only used for research purposes only.

Additionally, we greatly appreciate your time and cooperation in completing the attached questionnaire. If you have any questions or need clarification, you can see me.

Thank you so much for your valuable input and assistance in completing this questionnaire

---

Dengan sukacitanya dan kehormatan dapat menggabungkan anda semua dalam kajian saya Tujuan kajian ini adalah untuk mengenal pasti pandangan pelanggan industri kecergasan di daerah Tampin, Negeri Sembilan mengenai penilaian risiko yang berkaitan dengan peralatan, latihan dan persekitaran fizikal dalam kecergasan kemudahan. Ini benar-benar kajian akademik yang dilakukan untuk mencapai kehendak Master Pengurusan Projek di Open University Malaysia.

Sila lengkapkan soal selidik berdasarkan pendapat anda yang betul. Tidak ada soalan rumit dan tebal jawapan yang betul. Maklumat yang dikumpulkan akan diperiksa secara rahsia. Lebih-lebih lagi, maklumat ini hanya digunakan untuk tujuan penyelidikan sahaja.
Selain itu, kami sangat menghargai masa dan kerjasama anda dalam melengkapkan

borang soal selidik yang dilampirkan. Sekiranya anda mempunyai sebarang pertanyaan atau memerlukan penjelasan, anda boleh berjumpa dengan saya.

Terima kasih banyak atas input dan bantuan berharga anda dalam melengkapkan soal selidik ini

Section A / *Bahagian A:* Socio demographic Data / *Data demografi sosial*

Instruction: Please fill up your particulars by tick in the box (put tick sign)
Arahan: Tolong isikan butiran anda dengan menandakan dalam kotak.

Section A

Name the Gymnasium: _____

1. **Gende**r: (1) MALE ☐ FEMALE ☐ (2)

2. **Age of respondent**: ☐
(1) 18 -28
(2) 29 -39
(3) 40 Above

3. **Years of participating in gym training** - (1) 1 -2 years
(2) 2 years Above

Section B - Equipment position and Equipment Safety/*Kedudukan peralatan dan Keselamatan Peralatan*

No	Question/ Soalan	Strongly agree	Agree	Uncertain/ not applicable	Disagree	Strongly disagree
1	I understand the use of gym equipment and the dangers behind the use of equipment *Saya memahami penggunaan peralatan gim dan bahaya di sebalik penggunaan peralatan*					
2	The space provided for exercise is comfortable and safe *Tempat yang disediakan untuk bersenam adalah selesa dan selamat*					
3	Placement of gymnasium machine equipment suitable for training *Penempatan peralatan mesin gimnasium yang sesuai untuk latihan*					
4	Iron bar equipment is in good condition before the start of the training session *Peralatan palang besi dalam keadaan baik sebelum bermulanya sesi latihan*					
5	Treadmill placement according to recommended standards *Penempatan Treadmill mengikut standard yang disyorkan*					
6	Spinning bike placement is according to the recommended distance *Penempatan basikal berputar adalah mengikut jarak yang disyorkan*					
7	Iron chains worn on the training machine are in good condition and constantly monitored by gym supervisors *Rantai besi yang dipakai pada mesin latihan berada dalam keadaan baik dan sentiasa dipantau oleh pengawas gim*					
8	Bench used for free Wight training in good condition *Bangku yang digunakan untuk latihan Berat percuma dalam keadaan baik*					
9	Equipment safety signs are provided at each station and equipment used *Tanda keselamatan peralatan disediakan di setiap stesen dan peralatan yang digunakan*					
10	The distance of user movement between equipment is comfortable in the gym and not harmful *Jarak pergerakan pengguna antara peralatan selesa di gim dan tidak berbahaya*					

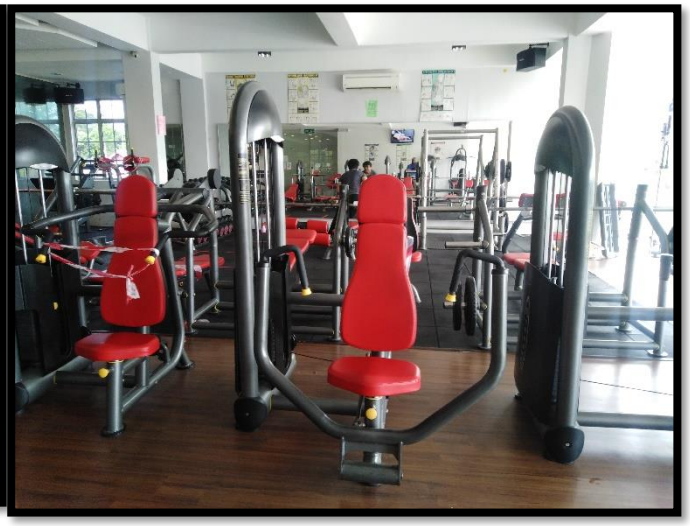
Section C – Hygiene equipment and gymnasium Environment/ Peralatan kebersihan dan persekitaran gymnasium

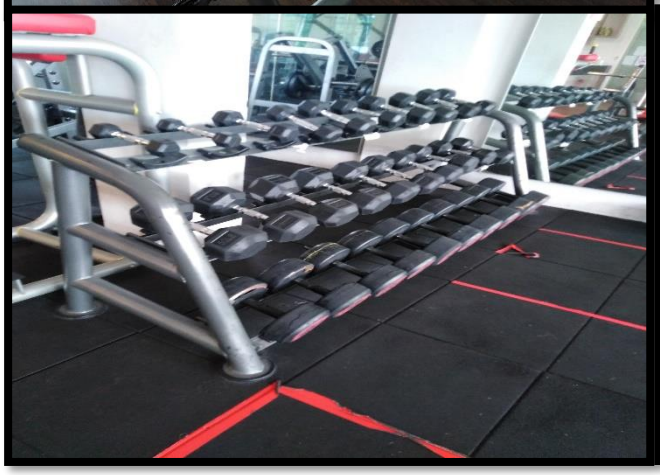
No	Question/Soalan		Strongly agree	Agree	Uncertain/ not applicable	Disagree	Strongly disagree
1	I understand the importance of hygiene in the gym which can lead to health problems *Saya memahami pentingnya kebersihan di gim yang boleh menyebabkan masalah kesihatan*						
2	Cleaning schedules are available at the gymnasium *Jadual pembersihan disediakan di gimnasium*						
3	Sanitizer processes for equipment and the environment are often carried out by gym workers *Proses pembersih untuk peralatan dan persekitaran sering dilakukan oleh pekerja gimnasium*						
4	Sanitiser spray containers are provided at the gymnasium for consumer use *Bekas semburan sanitiser disediakan di gimnasium untuk kegunaan pengguna*						
5	The gym floor is clean and suitable for training *Lantai gimnasium bersih dan sesuai untuk latihan*						
6	Gymnasium management always advises Users to clean the equipment after use *Pengurusan gimnasium selalu menasihati* *Pengguna membersihkan peralatan selepas digunakan*						
7	Goods lockers are available and safe to use *Loker barang ada dan selamat digunakan*						
8	Dust bin are provided and are always cleaned by gym workers T*ong sampah disediakan dan selalu dibersihkan oleh pekerja gimnasium*						
9	Toilet facilities are always in a clean condition *Kemudahan tandas sentiasa dalam keadaan bersih*						
10	I am happy with my answer to the question given *Saya gembira dengan jawapan saya terhadap soalan yang diberikan*						

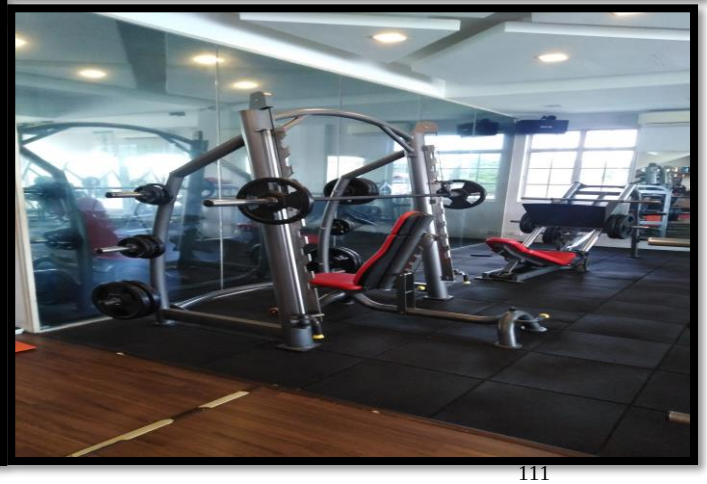
Appendix 2

Picture of Gymnasiums Equipment

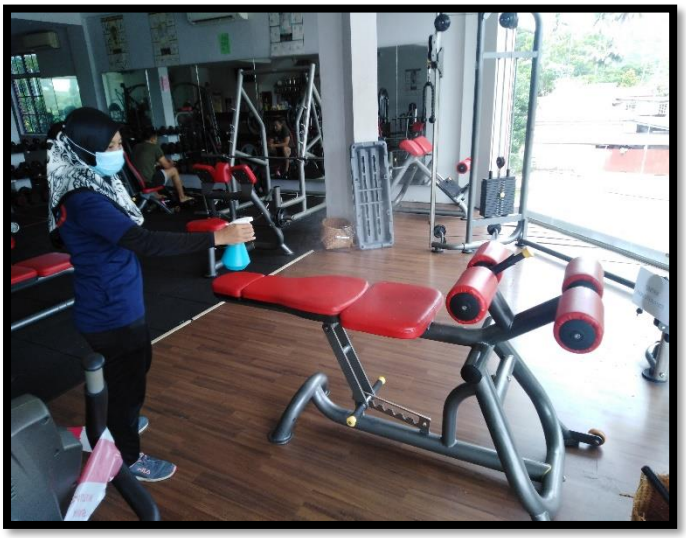
GYM A

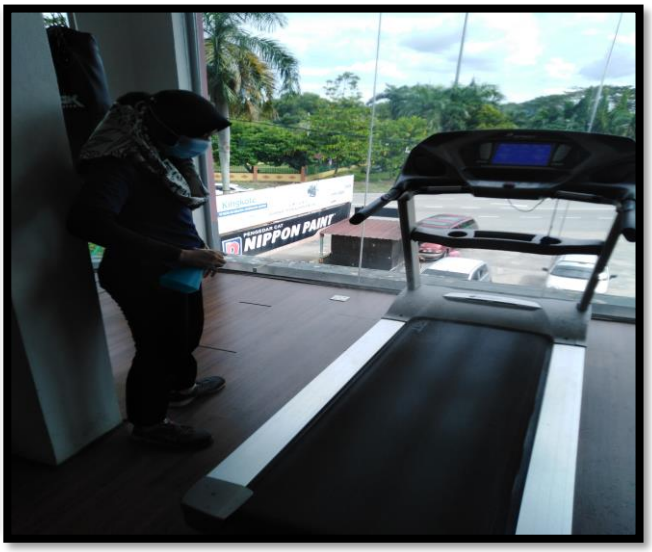






Distance Between Spinning Bike (16ince)





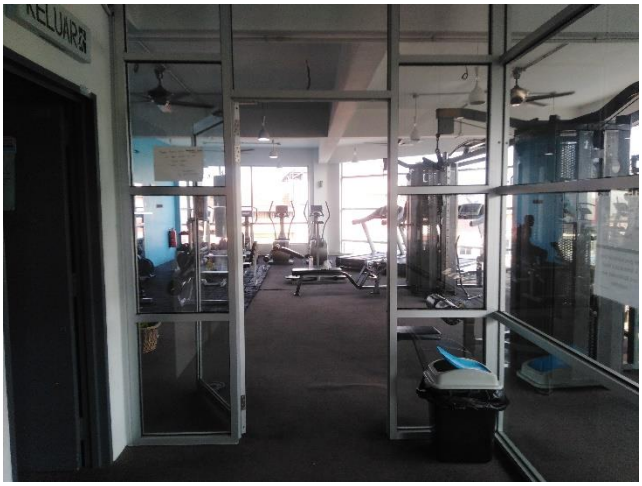
Sanitizes equipment Gym A by gym staff

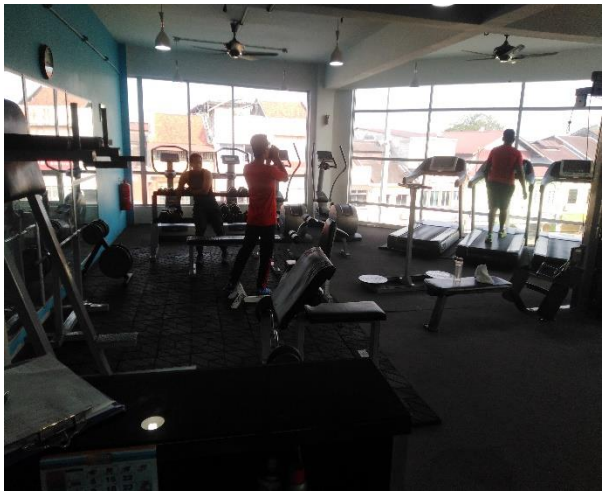
JADUAL KEBERSIHAN

HARI/ NAMA	ARIFF	SYIEDA	FUAD
ISNIN	LAP EQUIPMENT	MOP LANTAI	SAPU LANTAI
SELASA	MOP LANTAI	SAPU LANTAI	VACUUM
RABU	SAPU LANTAI	LAP EQUIPMENT	MOP LANTAI
KHAMIS	VACUUM	MOP LANTAI	SAPU LANTAI
JUMAAT	MOP LANTAI	SAPU LANTAI	
SABTU		MOP LANTAI	SAPU LANTAI
AHAD	SAPU LANTAI		MOP LANTAI

Gym A Cleaning Schedule

GYM B





GYM C

Appendix 3

GYM HIRACH FORM

Loaction	Tampin Negeri Sembilan			DATE					
1. HAZARD IDENTIFICATION				2. RISK ANALYSIS				3. RISK CONTROL	
No.	Activities (Routine / Non-Routine)	Actual and Potential Hazards	Which can Cause Potential Consequences / Risk Effects	Existing Control Measures	Likelihood (A)	Severity (B)	Risk Level (A) x (B)	Additional / Recommended Control Measures	Person In Charge (Due Date /
1	**Gym floor & enviroment**	**Chemical hazards -** Cleaning materials used to clean the gym (cleaning materials), Fire (too many plugs to electrical equipment under poor electrical supervision) **Electrical** (Power socket close to fountain, power cable partially disconnected while equipment is rolling over it) **Danger of slipping** / tripping (Equipment that is not returned to the shelf, spilled water is not swept) **Noise**-induced hearing loss (from repetitive exposure to sound system volume from unchecked radios) **Biological Hazard -** Cleaning of toilets, equipment, sinitezer	**Infectious Diseases** (Covid 19) **Electric shock** (burn & death) **Fire** (deadly) Dirty enviroment (stress) Laceration (slipping on wet floor in changing room) - Vapours or fumes may cause headaches or respiratory problems - Long-term exposure may lead to chronic (ongoing) health effects	Routine inspections by gym workers and complaints from user	3	3	**9**	• There should be a gym and equipment cleaning schedule and there should be daily monitoring • Every day before the start of the session and after the end of the training session, there should be a visual inspection • Staff must ensure that all equipment is in good condition & safe to use	

Likelihood (A)	Severity (B)	Hierarchy of Control	**Risk Level**
5 - Most Likely (The most likely result of the hazard / event being realized)	5 - Catastrophic (Numerous fatalities, irrecoverable property damage and productivity)	1 - Elimination	1-4 (Low)
4 - Possible (Has a good chance of occurring and is not unusual)	4 - Fatal (Approximately one single fatality major property damage if hazard is realized)	2 - Substitution	5-12 (Medium)
3 - Conceivable (Might be occur at sometime in future)	3 - Serious (Non-fatal injury, permanent disability)	3 - Isolation	15-25 (High)
2 - Remote (Has not been known to occur after many years)	2 - Minor (Disabling but not permanent injury)	4 - Engineering Control	
1 - Inconceivable (Is practically impossible and has never occurred)	1 - Negligible (Minor abrasions, bruises, cuts, first aid type injury)	5 - Administration Control	
		6 - Personal Protective Equipment (PPE)	

GYMMNASIUM	GYM B	Conducted by: (Name, Designation, Signature)	Vimalan a/l Palaniappan
Loaction	Tampin Negeri Sembilan	DATE	

1. HAZARD IDENTIFICATION				2. RISK ANALYSIS				3. RISK CONTROL	
No.	Activities (Routine / Non-Routine)	Actual and Potential Hazards	Which can Cause Potential Consequences / Risk Effects	Existing Control Measures	Likelihood (A)	Severity (B)	Risk Level (A) x (B)	Additional / Recommended Control Measures	Person In Charge (Due Date /
1	**Space beetween Equipment** Treadmill , Bike, Resistance Mehcine, free weight station,movement space	**Fire -** (too many plugs into electrical appliances under poor electrical supervision) **Electricity -** collided with a wire and disconnected during movement **Dangers of slipping / tripping** (Equipment not returned to the shelf, colliding with other users)	**Electric shock** (equipment burns & death) **Fire** (damage to property) **Laseration** (slipping on wet floor in dressing room) collided with each other (Narrow space) **serious injury** (collision with machine or iron rod)Broken bones, sprains and strains	Routine inspections by gym workers and complaints from user	3	3	**9**	**Administration Control** * Make sure Layout floor layout to allow gym users to avoid contact with others while using gym * Staff must ensure that all equipment is in good condition & safe to use	

Likelihood (A)	Severity (B)	Hierarchy of Control	**Risk Level**
5 - Most Likely (The most likely result of the hazard / event being realized)	5 - Catastrophic (Numerous fatalities, irrecoverable property damage and productivity)	1 - Elimination	1-4 (Low)
4 - Possible (Has a good chance of occurring and is not unusual)	4 - Fatal (Approximately one single fatality major property damage if hazard is realized)	2 - Substitution	5-12 (Medium)
3 - Conceivable (Might be occur at sometime in future)	3 - Serious (Non-fatal injury, permanent disability)	3 - Isolation	15-25 (High)
2 - Remote (Has not been known to occur after many years)	2 - Minor (Disabling but not permanent injury)	4 - Engineering Control	
1 - Inconceivable (Is practically impossible and has never occurred)	1 - Negligible (Minor abrasions, bruises, cuts, first aid type injury)	5 - Administration Control	
		6 - Personal Protective Equipment (PPE)	

GYMMNASIUM	GYM C	Conducted by: (Name, Designation, Signature)	Vimalan a/l Palaniappan
Loaction	Tampin Negeri Sembilan	DATE	

1. HAZARD IDENTIFICATION				2. RISK ANALYSIS				3. RISK CONTROL	
No.	Activities (Routine / Non-Routine)	Actual and Potential Hazards	Which can Cause Potential Consequences / Risk Effects	Existing Control Measures	Likelihood (A)	Severity (B)	Risk Level (A) x (B)	Additional / Recommended Control Measures	Person In Charge (Due Date /
1	**Space beetween Equipment** Treadmill , Bike, Resistance Mehcine, free weight station,movement space	**Fire -** (too many plugs into electrical appliances under poor electrical supervision) **Electricity -** collided with a wire and disconnected during movement **Dangers of slipping / tripping** (Equipment not returned to the shelf, colliding with other users)	**Electric shock** (equipment burns & death) **Fire** (damage to property) **Laseration** (slipping on wet floor in dressing room) collided with each other (Narrow space) **serious injury** (collision with machine or iron rod)Broken bones, sprains and strains	Routine inspections by gym workers and complaints from user	**4**	**3**	**12**	**Administration Control** * Make sure Layout floor layout to allow gym users to avoid contact with others while using gym * Staff must ensure that all equipment is in good condition & safe to use	

Likelihood (A)	Severity (B)	Hierarchy of Control	Risk Level
5 - Most Likely (The most likely result of the hazard / event being realized)	5 - Catastrophic (Numerous fatalities, irrecoverable property damage and productivity)	1 - Elimination	1-4 (Low)
4 - Possible (Has a good chance of occurring and is not unusual)	4 - Fatal (Approximately one single fatality major property damage if hazard is realized)	2 - Substitution	5-12 (Medium)
3 - Conceivable (Might be occur at sometime in future)	3 - Serious (Non-fatal injury, permanent disability)	3 - Isolation	15-25 (High)
2 - Remote (Has not been known to occur after many years)	2 - Minor (Disabling but not permanent injury)	4 - Engineering Control	
1 - Inconceivable (Is practically impossible and has never occurred)	1 - Negligible (Minor abrasions, bruises, cuts, first aid type injury)	5 - Administration Control	
		6 - Personal Protective Equipment (PPE)	

GYMMNASIUM	GYM (A,B,C)	Conducted by: (Name, Designation, Signature)	Vimalan a/l Palaniappan
Loaction	Tampin Negeri Sembilan	DATE	

1. HAZARD IDENTIFICATION				2. RISK ANALYSIS				3. RISK CONTROL	
No.	Activities (Routine / Non-Routine)	Actual and Potential Hazards	Which can Cause Potential Consequences / Risk Effects	Existing Control Measures	Likelihood (A)	Severity (B)	Risk Level (A) x (B)	Additional / Recommended Control Measures	Person In Charge (Due Date / Status)
1	**Free Weights (LIFFTING)** - Bar - Weight Plate - Dumbbells	**Physical Hazards** - Suitability of weights and iron rods for training **Ergonomic Hazard -**. Using right body position to lift weights **Chemical hazards** - Cleaning materials used to clean consumer sweat on weights (cleaning materials) **Biological hazard**-exercise participants not wiping equipment down after use risk spreading Hepatitis B and other nasty bugs, control of bleeding when a client is injured) **Psychological hazards** - Perform exercises according to the methods determined by the trainee.stress and fatigueg	**Fractures** (weight of the load lifted) Crushing (falling heavily on your feet) **Body amputation** (toes have been known to disappear when heavy plates have been dropped on bare feet) Severe **injuries** to the muscles and bones of the hands, shoulders, chest and wrists.Soft tissue injury, Muscle tension, Dislocation	Routine inspections by gym workers and complaints from users	**5**	**4**	**20**	**Administration Control** • There should be a daily inspection by the gym supervisor about the condition of the equipment and the position of the equipment (which is easy to move like bar, dumbbells and weight plate • There should be sanitary cleaning before and after the use of this item - Re-evaluate The layout of the floor to allow gym users to avoid colliding with others using the equipment	

Likelihood (A)	Severity (B)	Hierarchy of Control	Risk Level
5 - Most Likely (The most likely result of the hazard / event being realized)	5 - Catastrophic (Numerous fatalities, irrecoverable property damage and productivity)	1 - Elimination	1-4 (Low)
4 - Possible (Has a good chance of occurring and is not unusual)	4 - Fatal (Approximately one single fatality major property damage if hazard is realized)	2 - Substitution	12 (Medium)
3 - Conceivable (Might be occur at sometime in future)	3 - Serious (Non-fatal injury, permanent disability)	3 - Isolation	5-25 (High)
2 - Remote (Has not been known to occur after many years)	2 - Minor (Disabling but not permanent injury)	4 - Engineering Control	
1 - Inconceivable (Is practically impossible and has never occurred)	1 - Negligible (Minor abrasions, bruises, cuts, first aid type injury)	**5 - Administration Control**	
		6 - Personal Protective Equipment (PPE)	

GYMMNASIUM	GYM (B & C)	Conducted by: (Name, Designation, Signature)	Vimalan a/l Palaniappan
Loaction	Tampin Negeri Sembilan	DATE	

1. HAZARD IDENTIFICATION				2. RISK ANALYSIS				3. RISK CONTROL	
No.	Activities (Routine / Non-Routine)	Actual and Potential Hazards	Which can Cause Potential Consequences / Risk Effects	Existing Control Measures	Likelihood (A)	Severity (B)	Risk Level (A) x (B)	Additional / Recommended Control Measures	Person In Charge (Due Date / Status)
1	**Leg Press** **- Shoulder Press** **- Biceps/ Triceps machine** **- Chest fly machine** **- Chest Press machine** **- Leg extension Mechine** **- Squad track** **- Multi station**	**Physical Danger** - machine operation using pulley and strap (machine strap damaged or broken) **Ergonomic Hazard** - Body posture. User height and suitability of user equipment **Chemical hazards** - Cleaning materials used to clean consumer sweat (cleaning materials) **Psychological hazards** - Conduct training according to the methods determined by the instructo	**Muscle causing injury** Rectus Abdominis (stomach), Scapula & humerus (shoulder) main pectoralis (chest) **Emotional stress** as a result of over-training and fatigue that can cause fainting. **Slippery** machine holderAbdominal limb and spinal deformities	Routine inspections by gym workers and complaints from user - Good housekeeping activities and ensure equipment is stored after use - Install signage to warn of smooth surface	**5**	**4**	**20**	• Need to always check the tension of the belt and need to take immediate action if there is a complaint from the user. • There should be an inspection schedule by the machine supplier to take care of the maintenance of the machine • There should be a daily inspection by the gym supervisor about the condition of the equipment and the position of the equipment (which is easy to move) • Gymnasium staff need to know how to properly adjust the machine including seat, belt and weight adjustment * **Engineering Control** * **Administration Control**	

Likelihood (A)	Severity (B)	Hierarchy of Control	**Risk Level**
5 - Most Likely (The most likely result of the hazard / event being realized)	5 - Catastrophic (Numerous fatalities, irrecoverable property damage and productivity)	1 - Elimination	1-4 (Low)
4 - Possible (Has a good chance of occurring and is not unusual)	4 - Fatal (Approximately one single fatality major property damage if hazard is realized)	2 - Substitution	5-12 (Medium)
3 - Conceivable (Might be occur at sometime in future)	3 - Serious (Non-fatal injury, permanent disability)	3 - Isolation	15-25 (High)
2 - Remote (Has not been known to occur after many years)	2 - Minor (Disabling but not permanent injury)	4 - Engineering Control	
1 - Inconceivable (Is practically impossible and has never occurred)	1 - Negligible (Minor abrasions, bruises, cuts, first aid type injury)	5 - Administration Control	
		6 - Personal Protective Equipment (PPE)	

GYMMNASIUM	GYM (A)	Conducted by: (Name, Designation, Signature)	Vimalan a/l Palaniappan
Loaction	Tampin Negeri Sembilan	DATE	

1. HAZARD IDENTIFICATION				2. RISK ANALYSIS				3. RISK CONTROL	
No.	Activities (Routine / Non-Routine)	Actual and Potential Hazards	Which can Cause Potential Consequences / Risk Effects	Existing Control Measures	Likelihood (A)	Severity (B)	Risk Level (A) x (B)	Additional / Recommended Control Measures	Person In Charge (Due Date / Status)
1	**Resistance machines (LIFFITNG & PUSSING)** - **Leg Press** - **Shoulder press** - **Biceps machine** - **Calf machine** - **Leg press Machine** - **Pulldown machine** - **Chest fly machine** - **Chest press machine** - **Leg extension Mechine** - **Smith Machine** - **Cable biceps / triceps bar** - **Cables and Pulleys** - **Squad track**	**Physical Danger** - machine operation using pulley and strap (machine strap damaged or broken) **Ergonomic Hazard** - Body Posture of gym user **Chemical hazards** - Cleaning materials used to clean consumer sweat (cleaning materials) **Psychological hazards** - Conduct training according to the methods determined by the instructo	**Muscle causing injury** - Rectus Abdominis (stomach), Scapula & humerus (shoulder) main pectoralis (chest) **Emotional stress** as a result of over-training and fatigue that can cause fainting. **Slippery** machine holder	Routine inspections by gym workers and complaints from user - Good housekeeping activities and ensure equipment is stored after use - Install signage to warn of smooth surface	**5**	**4**	**20**	**Administration Control** • There should be an inspection schedule by the machine supplier to take care of the maintenance of the machine • Replace the damaged cable on the heavy machine in an instant scratch if there is damage • There should be a daily inspection by the gym supervisor about the condition of the equipment and the position of the equipment (which is easy to move) • Gymnasium staff need to know how to properly adjust the machine including seat, belt and weight adjustment	

Likelihood (A)	Severity (B)	Hierarchy of Control	**Risk Level**
5 - Most Likely (The most likely result of the hazard / event being realized)	5 - Catastrophic (Numerous fatalities, irrecoverable property damage and productivity)	1 - Elimination	1-4 (Low)
4 - Possible (Has a good chance of occurring and is not unusual)	4 - Fatal (Approximately one single fatality major property damage if hazard is realized)	2 - Substitution	5-12 (Medium)
3 - Conceivable (Might be occur at sometime in future)	3 - Serious (Non-fatal injury, permanent disability)	3 - Isolation	15-25 (High)
2 - Remote (Has not been known to occur after many years)	2 - Minor (Disabling but not permanent injury)	4 - Engineering Control	
1 - Inconceivable (Is practically impossible and has never occurred)	1 - Negligible (Minor abrasions, bruises, cuts, first aid type injury)	5 - Administration Control	
		6 - Personal Protective Equipment (PPE)	

GYMMNASIUM	GYM A	Conducted by: (Name, Designation, Signature)	Vimalan a/l Palaniappan
Loaction	Tampin Negeri Sembilan	DATE	

1. HAZARD IDENTIFICATION				2. RISK ANALYSIS				3. RISK CONTROL	
No.	Activities (Routine / Non-Routine)	Actual and Potential Hazards	Which can Cause Potential Consequences / Risk Effects	Existing Control Measures	Likelihood (A)	Severity (B)	Risk Level (A) x (B)	Additional / Recommended Control Measures	Person In Charge (Due Date /
1	**Gym floor & enviroment**	**Chemical hazards -** Cleaning materials used to clean the gym (cleaning materials), Fire (too many plugs to electrical equipment under poor electrical supervision) **Electrical** (Power socket close to fountain, power cable partially disconnected while equipment is rolling over it) **Danger of slipping** / tripping (Equipment that is not returned to the shelf, spilled water is not swept) **Noise**-induced hearing loss (from repetitive exposure to sound system volume from unchecked radios) **Biological Hazard -** Cleaning of toilets, equipment, sinitezer	**Infectious Diseases** (Covid 19) **Electric shock** (burn & death) **Fire** (deadly) Dirty enviroment (stress) Laceration (slipping on wet floor in changing room) - Vapours or fumes may cause headaches or respiratory problems - Long-term exposure may lead to chronic (ongoing) health effects	Routine inspections by gym workers and complaints from user	3	3	**9**	• There should be a gym and equipment cleaning schedule and there should be daily monitoring • Every day before the start of the session and after the end of the training session, there should be a visual inspection • Staff must ensure that all equipment is in good condition & safe to use	

Likelihood (A)	Severity (B)	Hierarchy of Control	Risk Level
5 - Most Likely (The most likely result of the hazard / event being realized)	5 - Catastrophic (Numerous fatalities, irrecoverable property damage and productivity)	1 - Elimination	1-4 (Low)
4 - Possible (Has a good chance of occurring and is not unusual)	4 - Fatal (Approximately one single fatality major property damage if hazard is realized)	2 - Substitution	5-12 (Medium)
3 - Conceivable (Might be occur at sometime in future)	3 - Serious (Non-fatal injury, permanent disability)	3 - Isolation	15-25 (High)
2 - Remote (Has not been known to occur after many years)	2 - Minor (Disabling but not permanent injury)	4 - Engineering Control	
1 - Inconceivable (Is practically impossible and has never occurred)	1 - Negligible (Minor abrasions, bruises, cuts, first aid type injury)	5 - Administration Control	
		6 - Personal Protective Equipment (PPE)	

GYMMNASIUM	GYM B	Conducted by: (Name, Designation, Signature)	Vimalan a/l Palaniappan
Loaction	Tampin Negeri Sembilan	DATE	

1. HAZARD IDENTIFICATION				2. RISK ANALYSIS				3. RISK CONTROL	
No.	Activities (Routine / Non-Routine)	Actual and Potential Hazards	Which can Cause Potential Consequences / Risk Effects	Existing Control Measures	Likelihood (A)	Severity (B)	Risk Level (A) x (B)	Additional / Recommended Control Measures	Person In Charge (Due Date /
1	**Gym floor & enviroment**	**Chemical hazards** - Cleaning materials used to clean the gym (cleaning materials), Fire (too many plugs to electrical equipment under poor electrical supervision) **Electrical hazard** (Power socket close to fountain, power cable partially disconnected while equipment is rolling over it) **Danger of slipping** / tripping (Equipment that is not returned to the shelf, spilled water is not swept) **Noise**-induced hearing loss (from repetitive exposure to sound system volume from unchecked radios) **Biological Hazard** - Cleaning of toilets, equipment,	**Infectious Diseases** (Covid 19) **Electric shock** (burn & death) **Fire** (deadly) Dirty enviroment (stress) Laceration (slipping on wet floor in changing room) - Vapours or fumes may cause headaches or respiratory problems - Long-term exposure may lead to chronic (ongoing) health effects	Routine inspections by gym workers and complaints from user	3	3	**9**	• There should be a gym and equipment cleaning schedule and there should be daily monitoring • Every day before the start of the session and after the end of the training session, there should be a visual inspection •Make sure the safety information on the detergent label and Material Safety Sheet Data Sheet (MSDS) is provided . -Provide appropriate personal protective equipment (PPE) during the cleaning process - **Administration Control - Personal Protective Equipment (PPE)**	

Likelihood (A)	Severity (B)	Hierarchy of Control	Risk Level
5 - Most Likely (The most likely result of the hazard / event being realized)	5 - Catastrophic (Numerous fatalities, irrecoverable property damage and productivity)	1 - Elimination	1-4 (Low)
4 - Possible (Has a good chance of occurring and is not unusual)	4 - Fatal (Approximately one single fatality major property damage if hazard is realized)	2 - Substitution	5-12 (Medium)
3 - Conceivable (Might be occur at sometime in future)	3 - Serious (Non-fatal injury, permanent disability)	3 - Isolation	15-25 (High)
2 - Remote (Has not been known to occur after many years)	2 - Minor (Disabling but not permanent injury)	4 - Engineering Control	
1 - Inconceivable (Is practically impossible and has never occurred)	1 - Negligible (Minor abrasions, bruises, cuts, first aid type injury)	5 - Administration Control	
		6 - Personal Protective Equipment (PPE)	

GYMMNASIUM	GYM C	Conducted by: (Name, Designation, Signature)	Vimalan a/l Palaniappan
Loaction	Tampin Negeri Sembilan	DATE	

1. HAZARD IDENTIFICATION				2. RISK ANALYSIS				3. RISK CONTROL	
No.	Activities (Routine / Non-Routine)	Actual and Potential Hazards	Which can Cause Potential Consequences / Risk Effects	Existing Control Measures	Likelihood (A)	Severity (B)	Risk Level (A) x (B)	Additional / Recommended Control Measures	Person In Charge (Due Date /
1	**Gym floor & enviroment**	**Chemical hazards** - Cleaning materials used to clean the gym (cleaning materials), Fire (too many plugs to electrical equipment under poor electrical supervision) **Electrical** (Power socket close to fountain, power cable partially disconnected while equipment is rolling over it) **Danger of slipping** / tripping (Equipment that is not returned to the shelf, spilled water is not swept) **Noise**-induced hearing loss (from repetitive exposure to sound system volume from unchecked radios) **Biological Hazard** - Cleaning of toilets, equipment, sinitezer	**Infectious Diseases** (Covid 19) **Electric shock** (burn & death) **Fire** (deadly) Dirty enviroment (stress) Laceration (slipping on wet floor in changing room) - Vapours or fumes may cause headaches or respiratory problems - Long-term exposure may lead to chronic (ongoing) health effects	Routine inspections by gym workers and complaints from user	3	3	**9**	• There should be a gym and equipment cleaning schedule and there should be daily monitoring • Every day before the start of the session and after the end of the training session, there should be a visual inspection •Make sure the safety information on the detergent label and Material Safety Sheet Data Sheet (MSDS) is provided . -Provide appropriate personal protective equipment (PPE) during the cleaning process - **Administration Control - Personal Protective Equipment (PPE)**	

Likelihood (A)	Severity (B)	Hierarchy of Control	Risk Level
5 - Most Likely (The most likely result of the hazard / event being realized)	5 - Catastrophic (Numerous fatalities, irrecoverable property damage and productivity)	1 - Elimination	1-4 (Low)
4 - Possible (Has a good chance of occurring and is not unusual)	4 - Fatal (Approximately one single fatality major property damage if hazard is realized)	2 - Substitution	5-12 (Medium)
3 - Conceivable (Might be occur at sometime in future)	3 - Serious (Non-fatal injury, permanent disability)	3 - Isolation	15-25 (High)
2 - Remote (Has not been known to occur after many years)	2 - Minor (Disabling but not permanent injury)	4 - Engineering Control	
1 - Inconceivable (Is practically impossible and has never occurred)	1 - Negligible (Minor abrasions, bruises, cuts, first aid type injury)	5 - Administration Control	
		6 - Personal Protective Equipment (PPE)	

GYMMNASIUM	GYM (A,B,C)	Conducted by: (Name, Designation, Signature)	Vimalan a/l Palaniappan
Loaction	Tampin Negeri Sembilan	DATE	

1. HAZARD IDENTIFICATION				2. RISK ANALYSIS				3. RISK CONTROL	
No.	Activities (Routine / Non-Routine)	Actual and Potential Hazards	Which can Cause Potential Consequences / Risk Effects	Existing Control Measures	Likelihood (A)	Severity (B)	Risk Level (A) x (B)	Additional / Recommended Control Measures	Person In Charge (Due Date / Status)
1	**Spinning bike** (leg movements and sitting while paddling. The appropriate height should be according to the height of the user	**Physical Hazard -** machine operation (broken or damaged engine belt) **Ergonomic Hazard** - Wrong body posture. **Chemical hazard-** A cleaning material used to clean consumer sweat (sanitizer) **Electric shock -** the machine uses an electric source	**Slipping** / Falling during training **Electric shock** from electricity source **Injuries**- Muscles in the legs namely Hamstring, Quadriceps Muscle and Calf Muscles. **Injuries** to the muscles and bones of the hands, shoulders, chest and wrists.Soft tissue injury, Muscle tension, Dislocation	Routine inspections by gym workers and complaints from users	**3**	**2**	**6**	• Gymnasium staff need to know how to properly adjust the machine including seat, belt and weight adjustmen • There should be an inspection schedule by the machine supplier to take care of the maintenance of the machine • Every day before the start of the session and after the end of the training session, there should be a visual inspection • Staff must ensure that all equipment is in good condition & safe to use - **Administration Control**	

Likelihood (A)	Severity (B)	Hierarchy of Control	**Risk Level**
5 - Most Likely (The most likely result of the hazard / event being realized)	5 - Catastrophic (Numerous fatalities, irrecoverable property damage and productivity)	1 - Elimination	1-4 (Low)
4 - Possible (Has a good chance of occurring and is not unusual)	4 - Fatal (Approximately one single fatality major property damage if hazard is realized)	2 - Substitution	5-12 (Medium)
3 - Conceivable (Might be occur at sometime in future)	3 - Serious (Non-fatal injury, permanent disability)	3 - Isolation	15-25 (High)
2 - Remote (Has not been known to occur after many years)	2 - Minor (Disabling but not permanent injury)	4 - Engineering Control	
1 - Inconceivable (Is practically impossible and has never occurred)	1 - Negligible (Minor abrasions, bruises, cuts, first aid type injury)	5 - Administration Control	
		6 - Personal Protective Equipment (PPE)	

GYMMNASIUM	GYM (A,B,C)	Conducted by: (Name, Designation, Signature)	Vimalan a/l Palaniappan
Loaction	Tampin Negeri Sembilan	DATE	

1. HAZARD IDENTIFICATION				2. RISK ANALYSIS				3. RISK CONTROL	
No.	Activities (Routine / Non-Routine)	Actual and Potential Hazards	Which can Cause Potential Consequences / Risk Effects	Existing Control Measures	Likelihood (A)	Severity (B)	Risk Level (A) x (B)	Additional / Recommended Control Measures	Person In Charge (Due Date / Status)
1	**Treadmill** (Run or run the machine at the appropriate speed. according to the ability of the user	**Physical Hazard** - machine operation (broken or damaged engine belt) **Ergonomic Hazard** - body posture when walking or jogging **Chemical hazard**- cleaning material used to clean consumer sweat (sanitizer) **Electric shock** - the machine uses an electric source	**Slipping / Falling during training** Electric shock from electricity source **Injuries**- Muscles in the legs namely Hamstring, Quadriceps Muscle and Calf Muscles	Routine inspections by gym workers and complaints from users	**3**	**2**	**6**	* Provide active supervision around the cardio equipment •Need to always check the tension of the belt and need to take immediate action if there is a complaint from the user. • There should be an inspection schedule by the machine supplier to take care of the maintenance of the machine • Staff must ensure that all equipment is in good condition & safe to use .- **Administration Control**	

Likelihood (A)	Severity (B)	Hierarchy of Control	Risk Level
5 - Most Likely (The most likely result of the hazard / event being realized)	5 - Catastrophic (Numerous fatalities, irrecoverable property damage and productivity)	1 - Elimination	1-4 (Low)
4 - Possible (Has a good chance of occurring and is not unusual)	4 - Fatal (Approximately one single fatality major property damage if hazard is realized)	2 - Substitution	5-12 (Medium)
3 - Conceivable (Might be occur at sometime in future)	3 - Serious (Non-fatal injury, permanent disability)	3 - Isolation	15-25 (High)
2 - Remote (Has not been known to occur after many years)	2 - Minor (Disabling but not permanent injury)	4 - Engineering Control	
1 - Inconceivable (Is practically impossible and has never occurred)	1 - Negligible (Minor abrasions, bruises, cuts, first aid type injury)	5 - Administration Control	
		6 - Personal Protective Equipment (PPE)	