

THE ROLE OF HEALTH DIAGNOSIS ON GYMNASIUM NEEDS OF STUDENTS OF UNIVERSITAS AIRLANGGA, SURABAYA

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ABSTRACT

Gymnastics is exercises in which physical activities and playing activities take place. At the same time, the nervous system works as a stimulant conductor in the form of coordination of muscle function. A gymnasium is prominent for university students as they need to be fit and healthy to do tasks given at the campus. This study aimed to identify gymnasium needs for students and the role of clinical diagnosis on the needs of students for a gymnasium at Universitas Airlangga, Surabaya. The research method was quantitative. The research population was all students of Universitas Airlangga, Surabaya. While the samples were chosen using nonprobability snowball sampling. This study utilized questionnaires as a primary data collection tool to understand gymnasium needs of the students of Universitas Airlangga. The results indicate the students required private gymnasium facilities such as swimming pools and cafeterias which only could be accessed by the society of academicians at Universitas Airlangga. This study concluded that the students were advised by doctors to do swimming which was their desired sport.

Keywords: need assessment, gymnasium, clinical diagnosis, swim.

ABSTRAK

Gimnastik merupakan senam di mana aktivitas gerak badan dan keterampilan bermain diterapkan. Pada saat yang sama, sistem syaraf bekerja sebagai penghantar rangsang dalam bentuk koordinasi fungsi otot. Gimnasium sangat penting bagi mahasiswa, dikarenakan mahasiswa harus ada dalam kondisi sehat untuk melaksanakan tugas yang diberikan di kampus. Penelitian ini bertujuan untuk mengetahui kebutuhan gimnasium dan pengaruh diagnosis klinis terhadap kebutuhan gimnasium mahasiswa di Universitas Airlangga, Surabaya. Metode penelitian yang digunakan merupakan metode kuantitatif. Populasi penelitian adalah seluruh mahasiswa di Universitas Airlangga, Surabaya. Sedangkan sampel dipilih menggunakan nonprobability snowball sampling. Kuisisioner digunakan sebagai alat pengumpulan data utama untuk memahami kebutuhan gimnasium mahasiswa Universitas Airlangga. Hasil menunjukkan bahwa mahasiswa memerlukan fasilitas gimnasium privat seperti kolam renang dan kafeteria yang hanya diakses oleh civitas akademika saja. Penelitian ini menyimpulkan bahwa mahasiswa Universitas Airlangga Surabaya mengikuti saran yang diberikan dokter untuk melakukan olahraga berenang dan ini sesuai dengan kebutuhan olahraga mahasiswa.

Kata kunci: penilaian kebutuhan, gimnasium, diagnosis klinis, renang.

INTRODUCTION

Gymnastics is exercises in which physical activities and playing skills take a place. At the same time, the nervous system works as a stimulant conductor in the form of coordination of muscle function. In this regard, Trudeau (2008) emphasizes that activities also improve important functions

for concentration, memory, and intellectuality. Takdir D., Mahmudin (2008) mention four important effects of physical activities in increasing knowledge and thinking processes. First, physical activities may increase the circulation of neurons that make a person get more oxygen and nutrients in the brain. Second, these stimulate the production of neurotransmitters that can

improve mood and foster Brain-Derived Neurotrophic Factor (BDNF) factors. Third, these facilitate a process of new brain cells so-called neurogenesis, and the fourth effect of physical activities is to improve visual acuity. Sunadi (2018) also states that fitness positively influences student achievement.

A fitness center or gymnasium is popular because it provides a variety of tools and facilities that have been designed properly for physical training (Muttaqin, Ifwandi, and Jafar 2016). Besides, a gymnasium is also very easy to find because now many entrepreneurs invest in gymnasiums. Gymnasium businesses have been mushrooming, especially in big cities. It is not surprising that competition in gym businesses arises quite fiercely. More and more gymnasiums are established, and thus the management must design certain strategies to offer gymnastic service products.

Moreover, the gym management must be able to sound marketing strategies to attract consumers as many as possible and to maintain the market share through th profit gain ((Makmur and Widagdo 2017). Various managerial efforts must be done, for example providing adequate facilities such as a comfortable, safe, and strategic room, complete weight training equipment for training needs, and excellent customer service. Besides, a gymnasium must have an appropriate and accurate training program as well.

People will show positive or negative behavior towards a new trend including the mushrooming gymnasium businesses. Notoatmojo (2003) defines that behavior is related to how a person responds to pain and disease from himself and from external factors. Kinds of responses include both passive responses (knowledge, perception, and attitude) and active responses (practice) towards pain and disease. A person's behavior towards pain and disease corresponds to the levels of overall disease prevention measures.

Notoatmojo further explains that someone will do an action if he behaves towards an object positively and believes that someone else wants him to take it. Theory of planned behavior explains beliefs influence attitude, subjective norms, and perceived behavioral control. These three components interact and become determinants of intentions for someone to act (Azwar, 2007). It suggests that someone who receives health diagnosis will probably decide on action they will take.

The establishment of a gymnasium in the campus area is vital for students because it facilitates students with healthy activities at campus. Saqurin (2013) ever found only 3 out of 10 students on average at Universitas Airlangga routinely did sports. This study investigated students at Universitas Airlangga to further know gymnasium needs of the students and identify whether health diagnosis could affect their gymnasium needs. From the research background above, this study aimed to determine needs of gymnasium and the role of health diagnosis on gymnasium needs of students at Universitas Airlangga, Surabaya.

METHODS

This study employed a descriptive-quantitative method. It used questionnaires as a primary data collection tool to understand gymnasium needs of students at Universitas Airlangga.

The research population was all active students (undergraduate, graduate, and doctoral students) at Universitas Airlangga. Population is all elements that have some common characteristics (Malholtra, 2004; Rinawiyanti et al. 2014). The samples were chosen using nonprobability snowball sampling. The selection of the samples started from a small number, and those who agreed to join recommended their colleagues to be the next respondent. The sampling was conducted in seven days and finally found 121 respondents consisting of 20 males and 101 females.

RESULTS

Perceived Components (Subject assessment)

This component discusses individual subjective factors that can influence needs. This study includes individual characteristics such as gender, age, desires, attitudes, and beliefs towards health.

Table 1. Distribution Frequency of Respondents by Gender.

Gender	Total
Male	20
Female	101
Total	121

Explained that respondents were dominated by women as many as 101 people while men were only as many as 20 people. This shows that the majority of women who want a gymnasium.

This study shows most of the respondents were aged 21-30 years old (75 people), and the 17-20 age group was the second dominant respondents (38 people). It suggests that those who were interested in a gymnasium were the adult age group.

Table 2. Distribution Frequency of Respondents by Age.

Age	Total
17-20 years	38
21-30 years	75
31-40 years	6
41-50 years	2

Table 3. Distribution Frequency of Respondents by Sport Favoritism.

Sports Favoritism	Total
Yes	88
No	32

Besides, this study finds the majority of the respondents liked sports (88 people).

Table 4. Distribution Frequency of Respondents by Reasons on Sports Favoritism.

Reasons	Total
To have it as a hobby	10
To make body healthy	65
To maintain weight	13
To do it as a lifestyle	2
To overcome stress	2
To improve our sleep quality	5
To do it as needs	1
Dislike sports	1
No answer	31

The results indicate most of the respondents liked sports because they wanted to maintain their body health (65 people).

Moreover, this study finds that the most favored sports was swimming (58 people).

Table 5. Frequency Distribution of Respondents by Favorite Sports.

Sports	Total
Basketball	1
Self-defense	1
Swimming	58
Cycling	2
Jogging/walking	3
Cardio	28
Treadmill	35
Weight gain	16
Weight loss	33 people
Yoga	1 people
Volleyball	2 people

Health diagnosis of students at Universitas Airlangga

This study addresses external factors that can also influence needs. These referred to physical ability of individuals and resources including the availability of

facilities that support health measures and health diagnosis. The health diagnosis identifies health problems and involves doctor's advice.

Table 6. Frequency Distribution of Respondents by Health Problems.

The existence of health problems	Total
Yes	44 people
No	76 people

This study does not find any health issues in most of the respondents (76 people). There were 44 respondents who were required to do exercises.

Table 7. Types of Health Problems Occuring to Respondents.

Types of health problems	Total
Allergy	1 people
Anemia	10 people
Asthma	3 people
Hypertention	1 people
Indigestion	17 people
Acne	2 people
Overweight	42 people
Obesity	9 people
Wasting	11 people
Irregular menstrual cycle	2 people
Bone abnormalities	1 people
Tiredness	2 people
Sprain	1 people
Constipation	1 people
No problems and noanswer	17 people

The respondents were mostly overweight (42 people).

Table 8. History of Respondents' Health Checks by Doctors

History of health checks	Total
Yes	53 people
No	68 people

Given that the majority of the respondents had health problems, this study reveals that 68 people did not go for medical check by doctors. It means the students tend to be less aware of their health issues.

Table 9. Doctors' Recommendations of Sports for Respondents.

Sports recommendation by doctors	Total
Basketball	1 people
Swimming	21 people
Yoga	1 people
Jogging/walking	5 people
Cardio	7 people
Treadmill	11 people
Weight loss	11 people
Light exercise	1 people
No recommendation	10 people
Not seeing a doctor	68 people

This study shows that the majority of the respondents who had health issues were advised to do swimming (21 people). Eleven respondents were advised to exercise on a treadmill, and the remaining were advised to do exercises for weight loss.

The role of health diagnosis on gymnasium needs

Table 11 presents that out of 120 respondents, as many as 97.50% of the respondents required a gymnasium at Universitas Airlangga.

Table 10. Gymnasium Needs of Respondents.

Gymnasium needs	Total
Yes	117 people
No	4 people

Table 11. Types of Gymnasium Facilities Required.

Gymnasium facilities	Total
Swimming pool	91 people
Cafeteria	67 people
Jacuzzi	33 people
Sauna	32 people
Lifting Weights, Gym Equipment, Fitness Equipment	9 people
Jogging Track, Tennis, Badminton, Volleyball, Basketball, Treadmill	6 people
Yoga, Pilates, Zumba	3 people
Changing room	1 people

Regarding desired gymnasium facilities, the majority of the respondents required pool (75.83%).

Table 12. Required Gymnasium Concept.

Gymnasium Concept	Total
Indoor	41 people
Outdoor	3 people
Indoor and Outdoor	76 people

This study informs that 63.35% of respondents preferred indoor and outdoor gymnasium.

Table 13. Need For Sports Coach.

Need for sports coach	Total
Yes	56 people
No	64 people

As many as 64 people did not need a personal trainer to assist them to exercise. This study finds that 82.50% of the respondents preferred to slip gym rooms for men and women. As many as 60.83% of respondents preferred private gymnasium

which only can be accessed by the society of academicians at Universitas Airlangga.

Table 14. Separation of Gymnasium Rooms by Gender.

Gymnasium rooms by gender	Total
Yes	91 people
No	21 people

Table 15. Preference on Gymnasium Users.

Gymnasium users	Total
Society of academicians	73 people
Society of academicians and public	47 people

DISCUSSION

Needs assessment is the process of determining priority needs. Seel and Glasgow explain that needs are discrepancies between what is available and what is available with what is expected. Need assessment is the process of gathering information about gaps and determining gap priorities to be solved "(Rinawiyanti et al. 2014).

Kaufman and English define needs analysis as a formal process to determine a gap between actual outputs and impacts with the desired outputs and impacts, place these gaps in priority scales, and then choose prioritized gaps to be resolved (Makmur and Widagdo 2017). Need analysis can be useful for identifying problem solutions.

Predisposing factors are factors that make them possibly determine what is needed (Samudin and Sasmito 2017). In other words, needs are the basis and direct stimulus for using health services. Needs are divided into two categories: perceived needs or perceived (subject assessment) and evaluated needs (health diagnosis). These variables are measured from various symptoms, disturbed functions, and perceptions of health (Liam et al. 2017).

Perceived needs (Subject assessment)

Green (1980) proposes two behavioral variables that may influence priority needs. These include predisposing factor and outside behavior (enabling factor and reinforcing factor). The predisposing factors include knowledge, attitudes, beliefs in health, values, perceptions, and demographic factors that will influence individual and community motivation to take action.

The respondents need indoor and outdoor gymnasium concepts, separate gymnasium rooms for men and women, and private gymnasium which only can be access by the society of academicians at Campus C, Universitas Airlangga. Most of those who required gymnasium facilities were female students aged 21-30 years. They favored sports because they wanted to keep the body healthy and maintain ideal weight.

Evaluated needs (Health diagnosis)

Despite perceived needs, enabling factors include personal skills, group resources, and community resources, including the availability of health service facilities, health workers, costs, distance, and access to transportation. Besides, reinforcing factors support the emergence of health measures and include family factors, friends, teachers, regulations, and legislation in the health sector, attitudes, and behavior of health workers, as well as other factors related to health providers.

Almost all students had health problems. Overweight was the most common health issue experienced by the students, and some also experienced digestive disorders (gastritis). Less than 50% of the students checked their health problems to doctors, and most of them were recommended to do swimming.

Role of health diagnosis on gymnasium needs

There are several steps in analyzing Gosslow's needs (Makmur and Widagdo 2017): The first step is gathering information, such as activities offered, who understands what, who will learn, obstacles, and the influence of certain circumstances. The information will be useful in determining goals to be achieved and priority problems to be resolved.

The second step is identifying gaps through the Organizational Elements Model (OEM). The model explains five elements (Suryana Hasim 2013). The first two elements involve input and process in the utilization of every potential and existing sources, and the other three include products, outputs and outcomes as the final result of a process. Input components include the present conditions, for example, finance, time, buildings, teachers, students, needs, problems, goals, and curriculum materials. Additionally, process components involve staff formation, education according to competencies, planning, methods, individual learning, and applicable curriculum.

Product components include completion of education, skills, knowledge, and attitudes, as well as successful competency test. Further, output components involve graduation certificates, prerequisite skills, and licenses. The outcome components are related to the adequacy and contribution of individuals or groups at present and in the future. Using these component analyses, gymnasium architects can determine the extent to which a gymnasium is useful for the users. These analyses essentially determine gaps between expectations and reality.

The next step is analyzing performance. In the third stage, after the architects understand various information and identifies gaps, they can analyze performance. They learn from formulating new management policies and a better organizational structure,

or developing materials and tools. Performance analysis includes identification of teachers, suggestions, school policies, social climate and psychological climate, as well as complete student learning support.

The fourth is identifying obstacles. Various obstacles may occur due to facility time, materials, grouping and composition, philosophy, personnel and organization. Besides, constraints also may arise from a learning program, for example, teachers, principals, and students themselves. Additionally, philosophy of work, work motivation, and competence may be other constraints too. Moreover, other constraints may occur due to the existing facilities, including the availability, completeness, and condition of the facilities, and the amount of funding and its allocation.

Then, the last step is identifying objectives (Makmur and Widagdo 2017). Need assessment is a process of identifying, documenting, and justifying gaps between the current situation and later outcomes based on the priority scale of each need Kaufman (1983). Not all needs are instructionally designed objectives. An architect needs to determine urgent needs more on the top of the others.

This study reports that nearly half of the students had a desire to do swimming as their doctors recommended to do so. Therefore, the students preferred swimming pool which becomes one of the gymnasium facilities. Most of them required mixed concepts of an indoor and outdoor gymnasium. In carrying out exercises, the majority of the students did not need a personal trainer. Finally, more than 80% of the students preferred separate gym rooms for male and female.

CONCLUSION

It can be concluded that the students at Universitas Airlangga require a gymnasium

that provides a swimming pool. The determination of students' gymnasium needs was considered through doctors' advice for swimming activities based on the health diagnosis. This study summarizes a health diagnosis plays a role on gymnasium needs of the students at Universitas Airlangga.

Considering high demands on the establishment of gymnasium and lots of its health benefits, the campus is expected to build a gymnasium with its required facilities. Moreover, further research should study more deeply about factors that affect motivation for exercises or sports so that the university may consider gymnasium facilities that can facilitate the students' most favorite sports.

REFERENCE

- Kotler, Armstrong. 2010. *Principles Marketing*. 17th ed. ed. Marc Oliver Opresnik. Northwestern: Global Edition.
- Liam, Wil et al. 2017. "Perancangan Gym Center Dengan Fasilitas Penunjang Bagi Pengguna Di Surabaya." *Intra* 5(2): 524–30.
- Makmur, Harbet, and Herry Widagdo. 2017. "HEALTHY GYM FAMILY (Perencanaan Pendirian Usaha Jasa Fitness Center)." *Jurnal Manajemen STIE Multi Data Palembang*: 1–15.
- Muttaqin, Andi, Ifwandi, and Muhammad Jafar. 2016. "Motivasi Member Fitness Center Dalam Melakukan Latihan Kebugaran Jasmani (Studi Kasus Pada Member Wana Gym Banda Aceh Tahun 2015)." *Jurnal Ilmiah Mahasiswa Pendidikan Jasmani, Kesehatan dan Rekreasi* 2: 100–113.
- Rinawiyanti, Esti Dwi, Rosita Meitha, Jeremia Januar, and Pratama Putra. 2014. "Studi Segmentasi Berorientasikan Psikografis Dan Behavioral Pada Konsumen Fitness Center Di Surabaya." *International Management di Fachhochschule Nuertingen University* 7(1): 25–38.

- Samudin, Esti Yulitriani T, and Adi Sasmito. 2017. "Semarang Sport Centre (Dengan Pendekatan Konsep Penekanan Hi-Tech Architecture)." *Universitas Pandanaran* (1): 1–20.
- Saqurin. 2013. "Tingkat Kebugaran Pada Mahasiswa Dengan Olah Raga Taekwondo Di Universitas Airlangga." *Fakultas Keperawatan Universitas Airlangga*: 7.
- Sugiyono. 2011. "Statistik Untuk Penelitian." : 1–370.
- Suryana Hasim. 2013. *Analisis Strategi Pemasaran Gym Dan Swimming Pool YHI Whellness Hotel Melia Purosani Yogyakarta*. Yogyakarta: Universitas Negeri Yogyakarta.
- Takdir D., Mahmudin, Sudirman. 2008. 1 *Kewirausahaan*. Wijaya Muhadi Karya : Yogyakarta.
- Trudeau. 2008. "Kumpulan Makalah Disampaikan Pada Konvensi Nasional Pendidikan Universitas Pendidikan Indonesia." *Jurnal Keolahragaan*