

THE INFLUENCE OF KNOWLEDGE, SKILLS AND ABILITIES ON THE COMPETENCY OF FITNESS CENTRE MANAGERS

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Abstract: This study was to identify the critical nature of knowledge, abilities, capabilities, and competencies in the management of fitness centers in Malaysia. This study is significant from a broad perspective for the development and growth of the fitness industry, particularly in Malaysia, as well as for the agencies and departments responsible for policy formulation. Method: The researchers gathered data through quantitative methods, interviewing a total of 600 managers of fitness centers in the Federal Territory of Kuala Lumpur, Putrajaya, and Selangor, the focus of fitness centers. Result: The study's findings indicate that the majority of managers view knowledge, skills, abilities, and competencies as 'critical' or 'very critical' to ensuring the quality management of fitness service provider centers. Conclusion: Each fitness center manager must possess specific elements within the variables or components of knowledge, skills, abilities, and competencies. The success of fitness center managers is no longer solely dependent on fitness knowledge, but they must also fully comprehend the importance of management skills such as marketing methods, operational operations, and financial management, as well as other issues affecting their fitness center. This study recommends in order to provide top quality services and run an efficient organization, each manager must have a strong knowledge base, capabilities, and competences. A manager must have the capacity to produce high-quality products or services, the ability to sell and advertise items as well as an understanding of customers' capacities as well as the ability to manage a company's finances.

Keywords: Fitness Centre, Competencies, Manager, Skills, Abilities And Knowledge.

I. INTRODUCTION

Members of health and fitness clubs pay a membership fee in exchange for access to exercise equipment and facilities. Over the past few years, the global fitness and health club industry's market has grown significantly, topping 96 billion US dollars in 2019 (Gough, 2021). Health clubs like 24 Hour Fitness and Life Time Fitness are among the world's most profitable. In 2018, LA Fitness had a revenue of more than two billion dollars.

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This segment in Malaysia is estimated to generate revenue of US\$48 million by 2021. A 3.74 percent annual growth rate (CAGR 2021-2024) is estimated to result in a market volume of US\$53 million by 2024 (Statista, 2020).

The understanding of how much physical activity influences one's well-being has risen to new levels in 2020, with the assertion that it is one of the strongest factors for good health.

Due to the increasing importance of wellbeing and mindfulness, fitness has become more relevant for many people. This market is growing, and the increased rivalry makes it more difficult to lure new members into fitness institutions in Malaysia (Teik, 2015). First and foremost, managers and fitness trainers must be educated in order to deliver the finest service possible (Pa, remuddin, Zin, & Bakar, 2019).

The fitness sector must deal with high member turnover and establish an atmosphere that caters well to customer wants in order to acquire considerable and quality involvement. Through value-added initiatives, the fitness center is accountable for capturing potential members' interaction intent (Teik, 2015). An organization that runs a fitness center sets a target customer every month, or even every year. There is a greater need than ever for competent fitness managers with the relevant skills in the fitness business today. These managers are able to match the expectations and needs of consumers, employees in sports organizations, and owners with their high-quality sports services.

Work in the fitness industry must be meticulously planned and organized. It should be led and supervised by sports management professionals with expertise in sports, management, and technical and social skills (Retar & Bardorfer, 2018). Over the last decade, competency research has examined the significance of interpersonal, marketing, financial, human resource, and management skills (Retar, 2014). Competencies can primarily be used as a foundation for developing curriculum in order to provide students – prospective fitness managers – with the necessary skills and knowledge in the sport's field (Ko, 2009). This goal is to increase the number of users who make significant contributions to the economy. However, what is the level of knowledge, skills, and abilities of Malaysian fitness center managers, and how do they relate to competencies?

Every business organization requires effective managers to be successful in today's highly competitive and dynamic business environment. A company's ability to identify, develop, and retain talented employees is critical. Every successful and effective manager possesses a set of competencies that enable him to perform effectively and efficiently at various levels of management (Bhardwaj &

Punia, 2013). A competency is a set of knowledge, skills, behaviors, and attitudes that contribute to personal effectiveness. Competencies are a set of knowledge, skills, behaviors, and attitudes required for a person to be effective in a variety of positions and organizations (Hellriegel et. al., 2005). Boyatzis (1982) defines competencies as "the underlying characteristics of a person that lead to or cause effective and exceptional performance." It also refers to the interpersonal and task-oriented abilities required for effective leadership and management (Martin & Staines, 1994). As a result, the assessment and effective implementation of competencies is critical for the survival and sustained growth of any individual or institution, necessitating the current work on managerial competency assessment.

Individuals in management positions must be knowledgeable and capable of carrying out specific management activities or tasks (Ibay & Pa-alisbo, 2020). Managerial skills are necessary for a variety of reasons. The existence of teamwork is dependent on effective management. A group of people requires an efficient and effective leader to achieve their goal and meet their mutual objectives (Moradi, Jafari, & Omid, 2013). An effective manager, according to Kheirdmand, Lotfi, and Etebarian (2012), must be skilled in four areas: technical skill, cognitive skill, human skill, and political skill. Managers and leaders must be able to manage in order to provide the appropriate context for the activities they perform. According to Goodarzi, Nazari, and Ehsani (2012), no manager will be successful in today's world unless they have basic management skills. Managers, in other words, must be well-versed in the dynamism of their work environment.

As a result, management skills determine the effectiveness and efficiency of managers' and leaders' performances. According to Nazari, Ghasemi, and Sohrabi (2016), effective athletic directors must plan ahead of time in order to improve communication and management skills in these organizations. Furthermore, according to Goodarzi, Nazari, and Ehsani (2012), managers who consider effective communication networks, improve human skills, including communicational and management skills of athletic managers, and explain the relationship between them, can improve the level of communication. This, in turn, will result in increased organizational effectiveness. Managers are responsible for an organization's success or failure. Management quality at all levels indicates manager penetration and effectiveness.

How well an organization operates is determined by its ability to manage its human resources and organizational management. These abilities include a manager's ability to apply technical knowledge and personal experience (Salehi & Mohammadi, 2014). Human skills are the unique abilities and characteristics that enable one to control and manage oneself and others (Torki, Shouriche, & Meshgati, 2011). Grobler et al. (2002) define training as "direct instruction, skill demonstration, workshops, and presentations." Training, on the other hand, entails instruction on job processes in an organization by an expert or experienced employee. According to Cronje, De, Gawie, and Motlatla (2004), providing employees with the knowledge, skills, values, and attitudes required to perform a specific job effectively and efficiently.

According to Katz's (1974) theory, a successful manager possesses three distinct managerial skills: conceptual skills, human skills, and technical skills. Management skills are divided into three categories: technical (security planning and organization), human (human relationships), and people skills (Daniel Katz & Robert Kahn, 1978). Motivating and moral abilities, as well as conceptual, emphasizing knowledge, and technical abilities, are all related to the organization's service.

Being a manager is not an easy task when it comes to collaborating with others. People are the most difficult to control of all the cost factors. Not everyone is at ease taking care of others. Nonetheless, certain personal characteristics can predict future managers' efficiency and success. Service elements such as technological development, professionalism, and standards are frequently emphasized and prioritized in the context of fitness programmed. The most recent developments in the fitness industry compel investors and fitness service providers to implement best practice techniques. Customers' expectations and expectations must always be met and prepared in a competitive and ongoing market competition. It is also necessary to create marketing materials. Knowledge of business, marketing, sports science, or other related fields is also required in this industry.

According to Teik (2015), fitness centres in Malaysia must adhere to strict professional standards in order to create a high-quality physical environment in line with the commercial fitness industry's growth. There is no accredited body that has issued a standard for fitness center operators to use as a reference and guide. Furthermore, in Malaysia, there is no model of fitness center management skills. Teik (2015) and Norkamarul (2017) studies only scratch the surface of service quality and the demand for personal fitness trainers and fitness instructors in Malaysia. From 1978 to January 2016, the Companies Commission of Malaysia (SSM) confirmed the registration of 946 fitness service companies. Out of that total, 198 businesses were discovered to have ceased operations. This to happen due to a lack of other skills required in fitness center management, rather than simply mastering fitness programmed knowledge.

This demonstrates the importance of conducting this research so that Malaysia's fitness industry can develop in tandem with developed countries in the field of sports and fitness programmed. Furthermore, the fitness or sports industry has the potential to be a factor in attracting foreign tourists to Malaysia. The success of fitness center managers is no longer solely dependent on fitness knowledge. They must also fully comprehend the importance of management skills such as marketing methods, operational operations, and financial management, as well as other issues affecting their fitness center.

Most fitness centers require managers to have personal trainer certifications or other fitness certifications from recognized agencies, bodies, and organizations. Professional fitness certification requires not only advanced knowledge in exercise science, but also skills in motivating others, being good listeners, and being service users with good relationships with others.

II. LITERATURE REVIEW

In this context, knowledge leads to needs in the fitness industry. Previous research has found that education and certification from reputable organizations are essential for fitness coaches and hiring managers (Rosado et al., 2014; Kuklick, 2016). Some studies (Abbott, 2018; Andreasson & Johansson, 2018) however combine certification, education, and/or experience into one category to determine its usefulness and importance. Gledhill et al. (2016) proposed in a previous study that the purpose of certification is to evaluate knowledge, skills, and capabilities, whereas education is intended to develop or train candidates or advance knowledge.

Dutchak (2018) conducted a study on the issue of fitness professional personnel in the modern era in Ukraine. The study's findings indicate that the level of professionalism of fitness trainers influences consumers and their health. As a result, it is necessary to actively evaluate the service provider's activity and skill level, as there may be burnout among the experts mentioned above, which, if not handled properly, can affect the quality of fitness center service. He also discovered that the effectiveness of fitness professional activities is determined by the quality of training, the level of professional knowledge, the ability and skills to apply the knowledge gained in practice, and the degree of readiness to perform professional activities in modern market conditions.

The skill or basis of individual knowledge associated with actions is represented by ability (Rothschild, 1999). Rothschild also mentioned that another influential determining factor of ability stems from Bandura's self-efficacy theory (1997), which states that those who expect high personal achievement have greater capacity in various tasks related to health and public health problems. One of the concepts in psychology is ability. Carr and Kingsbury (1938) discovered that ability was an important concept for educational and industrial psychology through their studies on the concept. It is critical in terms of placement and personnel. Only competency scores obtained under experimental conditions affecting other factors that are excluded can be used to assess an individual's ability. As a result, there are some capabilities that can be suggested as a result of this study.

Every successful and effective manager possesses a set of competencies that enable him to perform effectively and efficiently at various levels of management (Bhardwaj & Punia, 2013). A competency is a set of knowledge, skills, behaviors, and attitudes that contribute to personal effectiveness. Competencies are a set of knowledge, skills, behaviors, and attitudes required for a person to be effective in a variety of positions and organizations (Hellriegel et al., 2005). Boyatzis (1982) defines competencies as "the underlying characteristics of a person that lead to or cause effective and exceptional performance." It also refers to the interpersonal and task-oriented skills required for effective leadership and management (Martin and Staines, 1994).

Shirazi and Mortazavi (2009) discovered that responsiveness, proactiveness, effective communication, team building, negotiation, and decisiveness are the primary characteristics of an effective manager. The

concept of competency is founded on the theory of performance. Management performance is defined as the extent and quality of managers' contributions to the achievement of the organization's objectives (Shirazi and Mortazavi, 2009). A competency is a measurable personal trait associated with effective performance in a specific job, organization, or culture.

Several empirical studies have discovered a link between managerial skills and job performance (Jena & Sahoo, 2014; Bamel et al., 2015; Lakshminarayanan, Pai & Ramaprasad, 2016). Competencies are qualities that enable a person to do his or her job. They are different types and combinations of knowledge, skills, abilities, motivations, and characteristics (Lakshminarayanan, Pai & Ramaprasad 2016). According to the modern manager model, the manager is primarily an effective entrepreneur, an outstanding leader, and a dependable specialist capable of operating in a changing business environment while utilizing specialized knowledge (Tyrańska, 2016). A competency is a measurable human capability that is required for effective performance and can include knowledge, a single skill or ability, a personal characteristic, or a cluster of two or more of these attributes (Smutny, Procházka, & Vaculk, 2014). As a result, the goal of this study is to determine whether fitness center managers are influenced by their knowledge, skills, ability, and appropriateness.

III. METHODOLOGY

The variables of knowledge relationship, skills affecting the competency of fitness centre managers in Malaysia were measured using self-administered questionnaires in this research. Personal Trainer Knowledge, Skills, and Abilities Questionnaire (Cooper Institute, 2012) and Core Competencies and Knowledge, Skills, and Abilities: Essentials for Public Health Physical Activity Practitioners (ACSM's certification review, 2013) were used as questionnaires.

The population consists of a fitness centre manager who oversees a fitness centre that is registered with the Malaysian Companies Commission (SSM). According to SSM data obtained on April 19, 2016, Malaysia has 942 registered fitness centres. Only fitness centres registered in the Federal Territory and Selangor were chosen for sampling. There are numerous commercial fitness centres in both states and territories. Only 502 of the 600 managers from the 600 active fitness centres responded to the survey questionnaire.

A confirmatory factor analysis test was carried out to obtain items that truly measure the relationship of knowledge, skills affecting the competency of fitness centre managers. Match analysis shows good fit with value (khi square) $\chi^2 = 107.663$, $p = 0.000$, $\chi^2/df = 2.031$, $GFI = 0.955$, $CFI = 0.970$, $NFI = 0.943$, $TLI = 0.963$, $RMSEA = 0.050$. All compatibility analyses performed showed that GFI , CFI , NFI , TLI exceeded .90 with $RMSEA$ values within the range suggested by Hair et al (2006) i.e., did not exceed the value of .08, and showed the suitability of the study model with the impacted data. To obtain items that actually measure hedonistic behaviour, a confirmatory factor analysis test was conducted. Analysis results show good fit match with value (khi squared) $\chi^2 = 9.457$, $p = 0$

.000, $\chi^2/df = 2.364$, GFI = 0.991, CFI = 0.988, NFI = 0.980, TLI = 0.970, IFI = .988, RMSEA = 0.058. All compatibility analyses performed showed that GFI, CFI, NFI, TLI, IFI exceeded .90 with RMSEA values in the range between 0.03 and 0.08 suggested by Hair et al. (2006).

IV. FINDINGS

Demographic analysis (Table1) showed that two-thirds of managers involved in the fitness industry comprised 75.9% or 381 men, thus indicating that the industry is still dominated by men and female involvement is still low. This phenomenon not only exists in Malaysia but also in many countries although the fitness center is the focus of both women and men. In the meantime, the findings also show that the majority of fitness center managers consist of those under the age of 35, which is about 80%. There are possibilities in accordance with the characteristics and needs of the industry itself that necessitate the involvement of physical and energetic activity. In other words, it can be summarized that the industry is also dominated by a young workforce. There are various causes that lead to this phenomenon, including most visitors or customers consisting of those who are young, usually under the age of 40.

TABLE 1: RESPONDENT DEMOGRAPHIC

Variables	N	(%)
Gender		
Male	381	75.9
Female	121	24.1
Age		
26-30 years	241	48.0
31-35 years	111	22.1
36-40 years	103	20.5
≥ 41 years	47	9.4
Professional Education		
Diploma	165	32.9
Bachelor	242	48.2
Master	14	2.8
Ph.D.	3	0.6
Others	78	15.5
Field of Study		
Biomedical	7	1.4
Electric & Electronic	29	5.8
Engineering	97	19.3
Financial	5	1.0
Communication	6	1.2
Business Management	79	15.7
Accounting	9	1.8
Sports Sciences, Fitness & Exercise	160	31.9
Information Technology	25	5.0
Others	85	16.9
Fitness Professional Certification		
Yes	441	87.8
No	61	12.2
Body of Certification		
American Council on Exercise	105	20.9
American College of Sports Medicine	44	8.8
Fitness Edutaining Asia	97	39.2
National Academy of Sports Medicine	24	4.8
Ministry of Youth & Sports of Malaysia	21	4.2
Others	50	10.0
Not Related	61	12.2
Fitness Industrial Experience		
1-3 years	220	43.8
4-6 years	210	41.8
7-9 years	37	7.4
10-12 years	14	2.8
12 years and above	21	4.2

In terms of professional education, the study discovered that the majority of managers (48.2%) had Bachelor level education, followed by those with Diplomas (32.9%). The proportion of those with a Master's degree is small, at 2.8%, and only 0.6% have a PhD. In other words, 81 percent of those polled had a diploma or a bachelor's degree or higher. According to the findings, nearly one-third of managers, or nearly 32%, have a background in sports science, fitness, and exercise, while the rest have degrees in fields such as Engineering, Business Management, Biometrics, Electrical and Electronics, Finance, Communications, Accounting, and Information Technology. Their number of people working in the same industry is still small. However, in addition to academic credentials, as seen in other fields such as accounting and teaching services, 87.8 % or 441 fitness center managers had professional certificates in the related fitness industry.

According to the survey, 52.6 percent had fitness instructor certification, 28.9 percent had personal trainer certification, 3.2 percent had training psychologist certification, and 2.6 percent had other certifications. The dredgers were also obtained from a variety of local and international organizations. For example, 39.2 % of respondents said they have a Fitness Training Asia certificate, 20.9 % have a certificate from the American Council on Exercise, 8.8 % have an American College of Sports Medicine certificate, 4.8 % have a National Academy of Sports Medicine certificate, and 4.2 % have a certificate from the Malaysian Ministry of Youth and Sports. This means that, in addition to knowledge of fitness industry management and travel, the majority of fitness center managers have their skills and competencies recognized by authorities and professionals. Despite the fact that only about one-third of respondents had academic qualifications in the field of sports science, this aspect was viewed positively in terms of ensuring the provision of quality services, thus meeting the expectations, needs, and requirements of customers. From the perspective of experience in the fitness industry (norm), most of the respondents involved had between one to three years' experience of 43.8%, followed by between four to six years' experience of 41.8%. In addition, 7.4% of respondents (seven to nine years), 4.2% of respondents had experience of 12 years and above and only 2.8% of respondents had experience in the fitness industry between 10 to 12 years. This means that the majority of managers have served for six years and under, thus having enough experience to manage and operate their respective fitness centers.

More than two-thirds of managers were found to be serving in fitness centers operating in the Federal Territory of Kuala Lumpur. This shows that taking into account the development and modernization aspects, most of the fitness centers are located in the Klang Valley area. In terms of fitness center business model, the findings showed a majority (88.2%) of the affected fitness centers were independent facilities models whilst 6.4% and 5.4% of the centers had multi-unit operating models and franchise business operations (Table 2). With regard to the factors that encourage respondents to be in the fitness industry, almost a fifth or 24.3% of managers are involved in the fitness industry due to industry factors that offer a diversity of career opportunities. A total of 22.5% of respondents

chose this industry because of the career factors in the industry which allowed them to be "very easily appreciated". The rest of managers choose the industry because it offers a lot of benefits, their engagement allows them to enjoy tangible results, in addition to enabling them to own their own business and become franchise holders or become personal trainers that allow them to work on their own. A small proportion of managers choose the industry because they are confident that it will continue to grow, in addition to providing flexible workspaces that can work in a variety of environments.

TABLE 2: TYPES OF FITNESS CENTRE BUSINESS MODELS, LOCATION OF FITNESS CENTERS AND FACTORS DRIVING RESPONDENTS TO BE IN THE FITNESS INDUSTRY

Variable	N	(%)
Types of Fitness Centre Business Models		
Independent facilities		
Multifunctional Operation	443	88.2
Franchise	32	6.4
	27	5.4
Location		
WP Kuala Lumpur & Putrajaya	358	71.3
Selangor	144	28.7
Factors That Encourage to Be in The Fitness Industry		
The fitness industry offers a variety of career opportunities	122	24.3
A career in this industry allows me to be very easily appreciated	113	22.5
The fitness industry will continue to grow	42	8.4
A career that allows me to experience tangible results	51	10.2
I can own my own business, be a franchisee or a self-employed personal trainer	50	10.0
Flexibility in my daily work schedule		
I can work in a variety of environments	41	8.2
A lot of opportunities in industry	22	4.4
	61	12.2

Instruments Reliability

Based on Table 3, the reliability test is based on Cronbach's Alpha analysis and the overall value of the managers' questionnaire is 0.986. The reliability of the questionnaire is analyzed based on the coefficient "Cronbach's Alpha", which determines the reliability to measure the items in each variable. Cronbach's Alpha value for knowledge, skills, capabilities and competencies were 0.960, 0.950, 0.955 and 0.945 which exceeded the minimum value of 0.6 (> 0.6), while the overall Cronbach's Alpha value for variables was 0.986 which is greater than 0.6 (> 0.6). Therefore, all variables provide a reliable internal measure of reliability. Based on the values of Cronbach's Alpha analysis, it can be concluded that the measurement model is acceptable and verifiable.

TABLE 3: RELIABILITY ANALYSIS

Variables	Cronbach's Alpha	Items
Knowledge	0.960	31
Skills	0.950	20
Abilities	0.955	25

Competencies	0.945	22
Total	0.986	98

Data Normality

Normality analysis shows the trend measure for all knowledge data, skills, capabilities and competencies is between -1.247 to 0.591. If the trend measure for all knowledge items between the distances of -2.0 to 2.0, this means that all data for knowledge items is normal. Meanwhile, there is no kurtosis index greater than 10.00 (Kline, 2005), then, all items tested with kurtosis are also normal. The values for kurtosis are mixed between negative values and positive values. From the plot graph of Q-Q, it is observed that most drops above the straight line with a slight deviation of the point at the bottom of the line, which still indicates normal. Kolmogorov-Smirnov and Shapiro Wilks analysis was used to examine normality data. Insignificant analysis decisions (significant value > 0.05) indicate normal (Pallant, 2005). In this case, the significant value for knowledge, skills, capabilities and competencies is 0.000 indicating a breach to normal basic assumptions. This is due to the large sample size (N=502 in this study). Actually, K-S tests are sensitive to large sample sizes. This was confirmed by Hair et al. (2006), for a large sample size of 200 and above, non-normality data is evaluated by predisposition tests and kurtosis, although small deviations from normality can again be significant. Therefore, it can be continued with parametric statistical procedures.

Correlation Analysis

The analysis tests (Table 2) conducted showed there is a strong positive relationship between the level of knowledge and competency among fitness centre managers. The correlation coefficient obtained is 0.873, which indicates there is a significant relationship between knowledge and competencies at level 0.01 (p = 0.000). It reflects that both aspects are interconnected in the management of fitness centres. In addition, the analysis also shows that there is a relationship between the level of skill and competency of a fitness centre manager. Correlation coefficient = 0.927 is high and strong, which shows there is a significant link between skills and competencies at level 0.01 (p = 0.000). This finding shows that there is a direct relationship between the skill level and competency of a manager. The analysis also shows that there is a relationship between capability and competency level. The correlation coefficient obtained is high at 0.919, which leads to a significant link between capacity and competency at level 0.01 (p=0.000).

TABLE 4: CORRELATION BETWEEN LEVEL OF KNOWLEDGE, SKILLS, ABILITY AND COMPETENCY AMONG FITNESS CENTRE MANAGERS.

		Competency
Knowledge	Correlation Pearson	.873**
	Sig. (2-tailed)	.000
	N	502
Skill	Correlation Pearson	.927**
	Sig. (2-tailed)	.000
	N	502
Ability	Correlation Pearson	.919**
	Sig. (2-tailed)	.000
	N	502

** Correlation is significant at the level 0.01 (2-tailed)

Confirmatory Analysis Factor (CFA)

Structural equation modelling is used to examine the complex relationship between the variables. Four measurement models must be evaluated before combining them to form a hypothesis rather than a structure model when creating a structure model.

Specifications of Moderator Model and Structure Model

In this study, there are two hypothesized models that are proposed to be produced and tested using structural equation modelling. The first proposed model is to study the two moderator variables namely gender and the level of experience in fitness affecting the structure of the fitness Centre manager's competencies, while the second model is the Fitness Centre Manager Competency Model (KPPK) based on knowledge, skills and capabilities. Figure 1 shows the proposed hypothesis model.

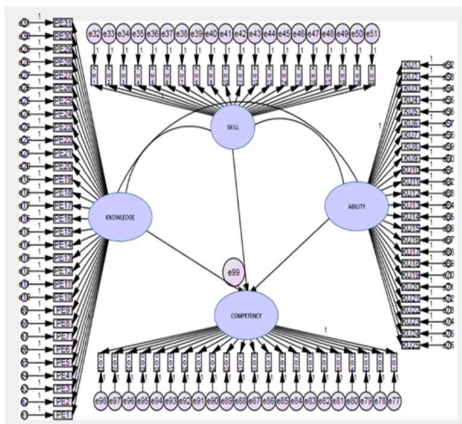


Figure 1: Competency Hypothesis Model Reserved

Confirmatory Factor Analysis for Individual Measurement Model

Structural equation modelling is used to examine the complex relationship between the variables. Table 5 showed that four measurement models must be evaluated before combining them to form a hypothesis rather than a structure model when creating a structure model.

TABLE 5: FITNESS INDEXES ASSESSMENT FOR COMPETENCY MEASUREMENT MODEL.

Category	Index	Value	Comments
Absolute fit index	RMSEA	0.059	Reach the required level
	GFI	0.918	Reach the required level
Incremental fit index	CFI	0.947	Reach the required level
Parsimonious fit index	Cmin/ df	2.735	Reach the required level

Procedures for Three Exogenous Constructs for Knowledge, Skills, Ability dan Competency

The CFA procedure for exogenous constructs for Knowledge, Proficiency, Ability and Competency is demonstrated in Figure 2. Figure 2 shows that the exogenous constructs for Knowledge and Ability are not highly correlated, whereas, for the exogenous constructs of Knowledge and Skills, as well as Skills and Abilities are highly correlated. So, only the constructs of Ability and Knowledge are not superfluous. The correlation measure between Skills and Abilities was 0.85, Knowledge and Ability was only 0.82, as well as Knowledge and Skills was

0.91. Since there is a correlation measure higher than 0.85, discriminant validity is not achieved and researchers have to perform the usual procedure of dropping one of the constructs or combining the two constructs that have high correlation (Awang, 2014). Since, the skill construct has a higher correlation of 0.85 with both constructs i.e., Knowledge and Ability construct, so, the researcher decided to drop the skill construct in the structural model for further analysis. The exogenous construct diagram for Knowledge and Ability after dropping the Skills construct from the model is shown in Figure 2 (a).

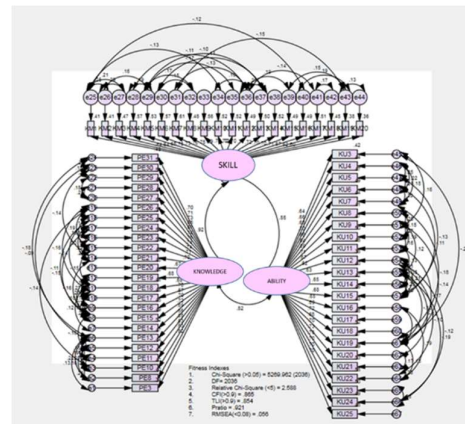


Figure 2: Correlation Measure Between Ability and Knowledge Constructs is less than 0.85, while Knowledge and Skills constructs, as well as Skills and Abilities are more than 0.85.

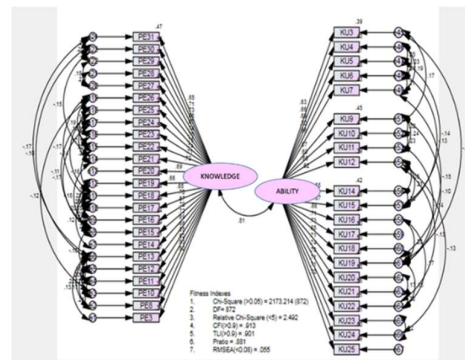


Figure 2 (a): "Fitness Indexes" after dropping items that have a high or excessive correlation.

Table 6 shows the evaluation of the Knowledge and Ability measurement model showing a GFI of less than 0.9. However, GFI is still acceptable (Homburg & Baumgartner, 1995). Therefore, the measurement model can be evaluated quite reasonably and acceptable. All 'fitness indexes' for this measurement model reach the required level.

TABLE 6: SUMMARY OF "FITNESS INDEXES" FOR THE KNOWLEDGE AND ABILITY MEASUREMENT MODEL

Category	Index	Value	Comment
Absolute fit index	RMSEA	0.055	Reach the required level
	GFI	0.834	Reach the required level
Incremental fit index	CFI	0.913	Reach the required level
Parsimonious fit index	Cmin/ df	2.492	Reach the required level

Validity and Reliability for Measurement Models

The reliability of measurements used in this study was the first to be assessed using Cronbach's Alpha before it was passed on to CFA. For Cronbach's Alpha, value is obtained through reliability analysis in SPSS software. When checking convergent validity, two additional steps will be seen where are Average Variance Extracted (AVE) and Construct Reliabilities (CR). AVE and CR are not provided by the AMOS software and therefore, are calculated from the estimates model using the formula provided by Awang (2014). According to Awang, the CR value must be equal to or greater than 0.6 and AVE should be equal or greater than 0.5 (Fornell and Larcker, 1981).

Table 7 shows the AVE and CR of each construct. The AVE value is above 0.5 and the CR exceeds 0.6. In addition, all measurement models are very suitable based on Goodness of Fit (GOF). Therefore, all indicator items are maintained at this point and proven convergent sufficient validity has been provided. It is inferred that the entire construct has been confirmed and accepted.

TABLE 7: SUMMARY OF CONFIRMATORY FACTOR ANALYSIS (CFA) DECISIONS FOR "DISCRIMINANT VALIDITY"

Construct	Knowledge	Ability	Competency
Knowledge	0.977		
Ability	0.810	0.949	
Competency	0.910	0.948	0.950

Analysing Hypotheses for The Construction of Knowledge and Ability to Influence Competency

Structure Model Combining Knowledge, Ability and Competency Constructs. This section demonstrates a structure model that combines the construct of knowledge, capability and competency and analysis for hypothesis testing between variables as well as analysis for moderator variables. Structure models are built based on verified measurement models and are shown in Figure 3.

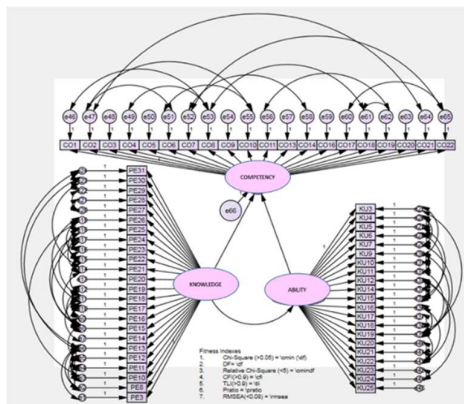


Figure 3: Structure Model for Competency Model.

The standardized values of regression weights for structure models that incorporate the construct of knowledge, capability and competency are given in Figure 4. Standardized Regression Weights for knowledge impact and on competency is 0.40 while Standardized Regression Weights for ability over competency is 0.62. This model shows all fitness indexes reaching the required stage. Although GFI is less than 0.9 but GFI is still acceptable (Homburg & Baumgartner, 1995, 1995). Similarly, although CFI is less than 0.9, but CFI is still acceptable

(Bentler, 1990).

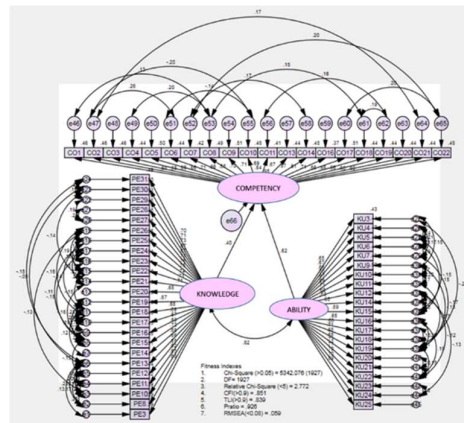


Figure 4: Standardized Regression Weights for Structure Models Combining Constructs of Knowledge, Ability and Competency.

Therefore, the structure model is evaluated quite reasonably and acceptable. Fitness indexes for models are evaluated and shown in Table 9.

TABLE 9: FITNESS INDEXES FOR STRUCTURED MODEL.

Category	Index	Value	Comments
Absolute fit index	RMSEA	0.059	Reach the required level
	GFI	0.800	Reach the required level
Incremental fit index	CFI	0.851	Reach the required level
Parsimonious fit index	Cmin/ df	2.772	Reach the required level

Analyse the Impact of Knowledge and Ability on Competency

Figure 5 shows the results of the direct impact of knowledge and ability on competency.

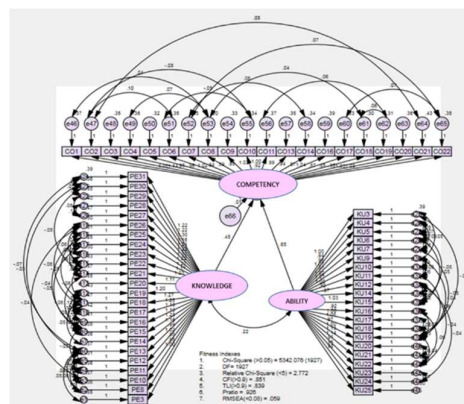


Figure 5: Regression Weights for Structure Models Combining Constructs of Knowledge, Ability and Competency

The results of the competency model analysis in Table 10 show that knowledge and capability is one of the factors that contribute to the competency of fitness Centre managers with a contribution of 95.2% towards variance changes.

TABLE 10: THE SQUARED MULTIPLE CORRELATION (R²)

Variable	R ²
Competency	0.952

Hypothesis Test to Analyze the Effects of Knowledge and Ability on Competencies.

This section examines the relationship between the role of knowledge and ability over the competency of fitness center managers. Table 10 shows the results of the analysis obtained.

TABLE 11: THE REGRESSION WEIGHTS FOR KNOWLEDGE AND ABILITY ON COMPETENCY.

		β	S.E.	C.R.
Competency	Knowledge	0.449	0.051	8.795
Competency	Ability	0.649	0.059	11.072

H1: Knowledge gives a significant impression on the Competency of the fitness centre manager

The definition of a true beta value with a value of 0.449 indicates that each increase in the knowledge value of one unit will increase the competency value by 0.449 units. Based on Table 11, the value p ($p = ***$) from the analysis indicates that it is smaller than the significant level of 0.05. Thus, the null hypothesis is rejected and the alternative hypothesis is supported. In conclusion, knowledge has a significant impact on the competency of a fitness centre manager.

H2: Skills influence the competency of fitness centre managers

Figure 2 illustrates the CFA procedure for exogenous constructs of Knowledge, Proficiency, Ability, and Competency. Figure 2 shows that the exogenous constructs of Knowledge and Ability are not highly correlated, whereas Knowledge and Skills, as well as Skills and Abilities, are highly correlated. As a result, only the constructs of Ability and Knowledge are not redundant. The correlation measure between Skills and Abilities was 0.85, but only 0.82 between Knowledge and Ability and 0.91 between Knowledge and Skills. Since the correlation measure is greater than 0.85, discriminant validity is not achieved, and researchers must follow the standard procedure of dropping one of the constructs or combining the two constructs with high correlation (Awang, 2014). As this skill construct has a higher correlation of 0.85 with both constructs (knowledge and ability), the researcher decided to remove it from the structural model for further analysis. Figure 2 (a) depicts the exogenous construct diagram for Knowledge and Ability after removing the Skills construct from the model.

H3: The ability to have a significant impact on the competency of fitness centre managers (CFCM).

Meanwhile, the definition for actual beta value with a value of 0.649 indicates that each increase in the capacity value of one unit will increase the competency value by 0.649 units. Thus, based on the information in Table 11, the value p ($p = ***$) from the analysis indicates that it is smaller than the significant level of 0.05. Thus, the null hypothesis is rejected and that concluded there is a significant impact on the competency of the fitness centre manager.

Based on the hypothesis analysis test carried out using SEM, the final model of the study is as shown in Figure 6.

It is a model formed based on the findings from SEM analysis tests on the research hypotheses. Using SEM analysis, this model was formed and analysis findings showed this model was fit. This model explains that there is a significant relationship between knowledge and competency of fitness Centre managers ($\beta = 0.449$, $p < 0.001$) as well as capabilities with the competency of fitness Centre managers ($\beta = 0.649$, $p < 0.05$). The results showed that both knowledge and capability were among the factors that contributed to the fitness Centre manager's competency with a 95.2% contribution to the variance change. Therefore, at this stage that the level of knowledge and capability plays an important role in determining the competency level of a fitness centre manager.

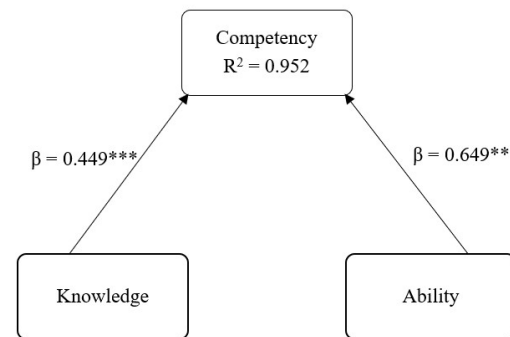


Figure 6: The Final Model of Competency of The Fitness Centre Manager in Malaysia.

V. DISCUSSION

Knowledge Influences the Competency of Fitness Centre Managers.

The study discovered that fitness centre managers' competency was influenced by their level of knowledge. Pearson Correlation analysis reveals both positive and strong relationships. Correlation coefficient = 0.873, indicating a significant relationship between knowledge and competencies at the 0.01 level ($p = 0.000$). Previous research (Bennie et al., 2017; Neferu, 2018; Parviainen, 2018; Raven, 2018) have showed that knowledge is related to the capacity, skills, and competencies of the parties involved in knowledge handling. For instance, Parviainen once emphasized the importance of knowledge in determining the competency of managers in the sports and fitness industry, while Neferu stated that managers operate within an attribution and responsibility system that necessitates in-depth knowledge of both the theoretical and practical aspects of sports activities. As a result, Neferu (2018) believes that administrators must demonstrate a number of properties that are in desperate need in order to perform their respective roles efficiently. To that end, the reviewers believe that managers of fitness service providers should appropriately demonstrate both specific skills and knowledge and a general ability to work with human factors. Additionally, this finding demonstrates that while knowledge is a critical strategic asset for achieving sustainable competitiveness and gaining power within an organization, simply possessing knowledge as an asset is insufficient and will not generate the desired value (Souteh, Esmaeili and Honari, 2018). Sports clubs are viewed through the eyes of consumers and newcomers to the

service industry.

Skills Influence the Competency of Fitness Centre Managers.

The CFA procedure for exogenous constructs of Knowledge, Proficiency, Ability, and Competency (KPAC) is depicted in Figure 2. As illustrated in Figure 2, while the exogenous constructs of knowledge and ability are not highly correlated, knowledge and skills, as well as skills and abilities are. As a result, only the abilities and knowledge constructs are not redundant. Correlations between skills and abilities were 0.85, but only 0.82 and 0.91 between knowledge and ability. The correlation coefficient is greater than 0.85, discriminant validity is not achieved, and researchers must follow the standard procedure of omitting one of the constructs or combining the two with a high correlation coefficient (Awang, 2014). Due to the higher correlation of 0.85 between this skill construct and both knowledge and ability constructs, the researcher decided to exclude it from the structural model for further analysis. After removing the Skills construct from the model, Figure 2 (a) depicts the exogenous construct diagram for Knowledge and Ability.

Ability To Influence the Competency of Fitness Centre Managers.

The researcher discovered that the ability factor also had an effect on the fitness center manager's competency level. The analysis reveals a correlation between ability and competency level. The correlation coefficient obtained, 0.919, indicates a significant relationship between ability and competency at the level of 0.01. The findings of this survey corroborated Rothschild (1999), Carr and Kingsbury (1938), and Shyr (2017). According to Shyr, managers who are able to bring technology into the organization are competent because they are able to ensure that others can effectively use existing technologies. These managers are referred to as "technology leaders." As Beggs et al. (2017) mention, a person's skills, knowledge, and abilities are required to succeed in a job. In this instance, employment is defined as the management and operation of fitness service provider centers. Indeed, as Yusof, Joseph, and Shah (2017) note in their operational review, the ability of a manager and any fitness center operator is critical to meeting the needs and expectations of customers.

According to the previous explanation, this study discovered that only the relationship between two constructs, namely knowledge and capability, has an effect on the fitness center manager's efficiency. While the exogenous constructs of knowledge and ability are unrelated, knowledge and skills, as well as skills and abilities, are. As a result, only abilities and knowledge constructs are protected from overstepping. Correlations between skills and abilities were 0.85, but between knowledge and ability were only 0.82 and 0.91. because the correlation coefficient exceeds 0.85, discriminant validity cannot be established, and researchers must use the standard procedure of omitting one of the constructs or combining the two with a high correlation coefficient (Awang, 2014). Due to the higher correlation coefficient of 0.85 between this skill construct and both the knowledge and ability constructs, the researcher chose to leave it out of the structural model for further analysis. Additionally,

based on the responses obtained, the capacity and level of knowledge played a role in determining a person's level of competency. The ability to complement knowledge (Naim & Lenka, 2017) is critical in determining a manager's competency. As Beggs et al. (2017) noted, knowledge and capability are indeed necessary for the operators' and centers' success and development. Additionally, concurred with Grant and Baden (2018) assertion that competency is influenced or determined by a person's level of knowledge and capability. Indeed, as the Faramarzi et al. (2019) study emphasizes, selecting managers based on their competency levels is critical to ensuring the business's sustainability. Thus, the success of a center is contingent upon the managers' efficiency, Competency, and effectiveness. The findings of this study demonstrate the critical importance of selecting an efficient and knowledgeable manager.

The Appropriate Competency Model in Terms of Knowledge and Abilities of Fitness Centre Managers in Malaysia.

Apart from the Pearson Correlation test, the Structural Equation Modelling (SEM) procedures used to determine the strength of variables associated with competency levels. Knowledge and capability have an effect on a manager's level of competency. This model was developed using the results of SEM analysis tests conducted on the study hypotheses. This model (Figure 6) explains why there is a significant relationship between fitness center managers' knowledge and competency, as well as their capabilities with KPAC. The analysis revealed that knowledge and capability contributed 95.2 % of the variation in competency. In other words, both variables contribute significantly to determining a manager's level of competency when compared to the other variables examined, namely the manager's gender and length of work experience. The skills do have a connection in terms of competency, as determined by the Pearson Correlation test, but the connection is not as strong.



Figure 7: Model for Competency of Fitness Centre Manager (CFCM)

Although the initial study demonstrated a significant correlation between skills individually, after performing the CFA procedure on three exogenous constructs of knowledge, skills, capabilities, and competencies, the results indicated that the skill construct had a high correlation of greater than 0.85. Thus, only the ability and

knowledge constructs are not excessive. Skills and capabilities have a correlation of 0.85, knowledge and capability have a correlation of 0.82, and knowledge and skills have a correlation of 0.91. Due to the presence of a correlation greater than 0.85, discriminant validity cannot be established, and researchers were forced to employ a common procedure, namely dropping one of the constructs or combining the two highly collegiate constructs (Awang, 2014). Due to the fact that the skill construct has a higher correlation coefficient of 0.85 with both the Knowledge and Capability constructs, the researchers decided to remove the skill construct from the structure model for subsequent analysis.

Knowledge, capability, and competency are three characteristics or components that every fitness centre management should possess. A business model's longevity, competitiveness, and long-term viability will be determined by each component's (table 12). In order to provide top quality services and run an efficient organisation, each manager must have a strong knowledge base, capabilities, and competences. A manager must have the capacity to produce high-quality products or services, the ability to sell and advertise items as well as an understanding of customers' capacities as well as the ability to manage a company's finances.

TABLE 12: FEATURES OF EACH COMPONENT OR VARIABLE STUDIED

	Knowledge	Ability	Competency
1	Ability background and customer/user fitness	Ability background and customer/user fitness	Develop community intervention - based policies
2	Nutrient uptake and metabolism	Using methods of estimating resting metabolic rate and basal metabolic rate	Best procedural practices for dispute resolution
3	Type of injury	Teach and demonstrate the use of training equipment	Regulate consumer and employee behavior
4	Principles of weight training, specificity and progression	Developing and complying with emergency/injury procedures	User/customer ability
5	Information on appropriate and relevant training for customers	Provide the development of cardiorespiratory training programs	A broad understanding of the fitness services industry
6	Customer records administration and maintenance techniques	Data analysis and understanding of information	Program outcome
7	Principles of providing customer/consumer services	Provide reports and documentation	Central management issues and problems
8	Service marketing and promotion strategies	Decision making	Strategies and policies prevent misuse of facilities and equipment
9	Financial and budget management	Sales and Marketing	Human Resources Management
10	Planning and implementation of training programs	Plan, implement and evaluate programs	Use of fitness center equipment facilities

11	Provision of personal training services	Plan and assign responsibilities to subordinate staff	Effective communication skills
12	Laws and regulations on the industry	Related safety checklists and standards	Build a collaborative network strategy
13		Compliance with the latest laws and regulations including the Health Fitness Industry Code of Practice	Organizational management leadership
14		Occupational safety and health including emergency plans	Have the latest information on market trends and products
15		Crisis Management	Ability to act flexibly
16		Has received certification and recognition on a national and international level.	Critical Thinking
17		Provide service training for the use of new equipment	Optimal use of resources

VI. CONCLUSION

Fitness services in Malaysia are expected to increase and develop as a result of this study's findings. As a result of this study, service provider centers should priorities service quality in order to ensure that their consumers receive high-quality services and this is crucial for the business's survival. To keep Malaysians interested, especially those who reside in cities, even if it's just for their own personal usage, the industry's development must be given a comprehensive approach. Starting with the CFCM model from this study, the industry's sustainable development might be improved by using it. However, despite the fact that Malaysia's commercial fitness industry is growing rapidly, it is becoming increasingly difficult to attract new members due to increased competition in the industry. The study also identified needs for commercial fitness personnel and the role of engagement in determining overall satisfaction with services. Fitness center manager must possess a strong knowledge base, capabilities, and competencies related to providing high-quality services and operating a business capable of generating a profit, which will also determine the business model's durability, competitiveness, and sustainability.

REFERENCES

- Abbott, M., (2018). *Characteristics of Successful Personal Trainers*. (Doctoral dissertation). Columbia University.
- Andreasson, J., & Johansson, T., (2018). Globalised Fitness: The Franchising of a Physical Movement, *Fitness Professionalism and Gender*. *Leisure/Loisir*, 42(3), 301-321.
- Awang, Z. (2014). *A handbook on structural equation modeling*. MPWS Rich Resources.
- Bamel, U. K., Rangnekar S., Stokes P., & Rastogi R. (2015), *Managerial Effectiveness – an Indian*

- Experience, *Journal of Management Development*, 34 (2), <https://doi.org/10.1108/JMD-10-2012-0129>
- Bandura, A., 1997. The anatomy of stages of change. *American Journal of Health Promotion*, 12(1), 8-10.
- Beggs, P., Shields, C., Telfer, S., & Bernard, J. L. (2017). Chronicling the Impact of the 21st Century Innovation Research Initiative on Students, Teachers, and System.
- Bennie, A., Peralta, L., Gibbons, S., Lubans, D., & Rosenkranz, R. (2017). Physical education teachers' perceptions about the effectiveness and acceptability of strategies used to increase relevance and choice for students in physical education classes. *ASIA-Pacific journal of teacher education*, 45(3), 302-319.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological bulletin*, 107(2), 238.
- Bhardwaj, A. & Punia, B. K. (2013). Managerial competencies and their influence on managerial performance: A literature review introduction. *International Journal of Advanced Research in Management and Social Sciences* 2(5), 70-84.
- Boyatzis, R.E. (1982), *The Competent Manager: A Model for Effective Performance*, John Wiley & Sons, New York, NY
- Carr, H.A. and Kingsbury, F.A., 1938. The concept of traits. *Psychological Review*, 45(6),
- Cronje, G. J., De, J., Du, T. Gawie, S., & Motlatla, M. D. C. (2004). *Introduction to Business Management (6th ed.)*. Oxford University Press: Southern Africa.
- Dutchak, M., & Chekhovska, L., 2018. Staffing as A Topical Issue of the Modern Fitness Industry. *Slobozhanskyi Herald of Science and Sport*, 6(68), 26-31.
- Faramarzi, S., Sepahvand, R., Vahdati, H., Nazripour, A. H., & Mirahaed, H. T. (2019). Presenting a manager selection pattern based on competency: a case study of Shahrekord and Isfahan Universities of Medical Sciences. *Journal of Shahrekord University of Medical Sciences*, 21(2), 104-109.
- Gholipour Souteh, R., Esmaili, M. R., Honari, H., & Ghorbani, M. H. (2018). The factors affecting knowledge sharing at the Iranian ministry of sports. *Annals of Applied Sport Science*, 6(1), 87-94.
- Gledhill, N. et al., 2016. Consensus on Evidence-based Preparticipation Screening and Risk Stratification. *Annual Review of Gerontology and Geriatrics*, 36(1), 53-102.
- Goodarzi, M., Nazari, R., & Ehsani, M. (2012). Presenting the Structural Equation Model of Effecting of Communication Skills on Managerial Skills of Sports Administrators. *Applied Research in Biological Science in Sports Management*, 1, 11-20.
- Gough, C. (2021). *Health & Fitness Clubs - Statistics & Facts*. <https://www.statista.com/topics/1141/health-and-fitness-clubs/>
- Grant, R. M., & Baden-Fuller, C. (2018). How to develop strategic management competency: Reconsidering the learning goals and knowledge requirements of the core strategy course. *Academy of Management Learning & Education*, 17(3), 322-338.
- Grobler, P., Warnich, S., Carrell, M., Elbert, N., & Hatfield, R. (2002). *Human resource management in South Africa*. Cornwall: Thomson, Pat bond, London.
- Gym Manager Career. <https://www.mymajors.com/career/gym-manager/skills/>
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). Structural equation modeling: An introduction. *Multivariate data analysis. 6th Edition*. New Jersey: Pearson Prentice Hall, 752-753.
- Hellriegel, Don, Jackson S.E., and Slocum J.W., Jr., (2005), *Management a competency-based approach*, Cengage Learning, New Delhi.
- Homburg, C., & Baumgartner, H. (1995). Applications of Structural Equation Modeling in Marketing and Consumer Research. *A Review. Arbeitspapier des Otto-Beisheim-Stiftungslehrstuhls für Betriebswirtschaftslehre, WHU, Vallendar*. https://www.acsm.org/docs/default-source/certification-documents/specialty/corecompetenciespaphs.pdf?sfvrsn=eba72975_2
- <https://www.cooperinstitute.org/vault/2440/web/files/664.pdf>
- <https://www.marketwatch.com/press-release/digital-content-market-estimated-to-grow-with-cagr-of-15-during-the-forecast-period-2021-2024-with-top-leading-players-2021-07-20>
- <https://www.statista.com/outlook/dmo/eservices/fitness/malaysia>
- Ibay, S. B., & Pa-alisbo, M. A. C. (2020). An Assessment of the Managerial Skills and Professional Development Needs of Private Catholic Secondary School Administrators in Bangkok, Thailand. *World Journal of Education*, 10(1), 149-163.
- Jena S., Sahoo C. K. (2014), Improving Managerial Performance: A Study on Entrepreneurs and Leadership Competencies, *Industrial and Commercial Training*, 46(3), <https://doi.org/10.1108/ICT-10-2013-0066>.
- Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations*. New York: Wiley.
- Katz, R. (1974). Skills of an Effective Administrator. *Harvard Business Review*, 52, 90-102. <https://doi.org/10.2307/41164516>
- Kheirmand, M., Lotfi, H. & Etebarian, A., (2012). Study the Relationship Between Management Skills of Agricultural Bank Managers of Esfahan Province with The Performance of The Branches. Institute for Humanities and Cultural Studies, *Comprehensive Human Sciences Portal*, 2, 93.
- Kheirmand, M., Lotfi, H., & Etebarian, A. (2012). Study the Relationship Between Management Skills of Agricultural Bank Managers of Esfahan Province with The Performance of The Branches. *Quarterly Journal of Management and Development Process*, 25(3), 93-119.
- Ko, L. M. (2009). *A systematic review of the literature on management competencies in the sports industries*, 2009 International Conference on Knowledge-Based Economy & Global Management, Tainan, Taiwan.
- Kuklick, C. R., Gearity, B. T., Thompson, M. & Neelis, L. 2016. A case study of one high performance baseball coach's experiences within a learning community. *Qualitative Research in Sport, Exercise and Health* 8(1): 61-78. doi:10.1080/2159676X.2015.1030343
- Lakshminarayanan, S., Pai, Y. P. & Ramaprasad, B. S.

- (2016). Competency need assessment: a gap analytic approach. *Industrial and Commercial Training* 48(8), 423–430. doi:10.1108/ICT-04-2016-0025
- Martin, G. and Staines, H. (1994), Managerial competencies in small firms, *Journal of Management Development*, 13(7), 23-34.
- Moradi, M., Jafari, A., & Omid, A. (2013). A Modeling the Impact of Transformational Leadership on Organizational Citizenship Behavior and Organizational Justice Youth and Sports Ministry of the Islamic Republic of Iran. *Sport Management*, 4, 124-107.
- Naim, M. F., & Lenka, U. (2017). Linking knowledge sharing, competency development, and affective commitment: Evidence from Indian Gen Y employees. *Journal of Knowledge Management*.
- Nazari, R., Ghasemi, H., & Sohrabi, Z. (2016). The Relationship Between Communication Skills, Leadership Styles, and Culture and the Effectiveness of Managers in Sports Organizations: Structural Equation Modeling. *Journal of Sport Management and motor behavior*, 21, 102-93. <https://doi.org/10.14486/IntJSCS658>
- Neferu, F. (2018). The importance of the manager's qualities in developing the sports Organization. *Annals-Economy Series*, 2, 109-114.
- Norkamarul Norzam (2017). *Employment within Sport & Physical Activity Sector: A Study on Personal Trainer and Fitness Instructor in Malaysia* (Doctoral dissertation)
- Pa, W. A. M. W., Salamuddin, N., Zin, N. M., & Bakar, A. Y. A. (2019). Service Quality among Sports and Fitness Practitioners in Malaysia: A Case Study. *International Journal of Academic Research in Business and Social Sciences*, 9(7), 273–284.
- Pallant, J. (2005). SPSS survival manual: A step guide to data analysis using SPSS.
- Parviainen, J. (2018). Embodying industrial knowledge: An epistemological approach to the formation of body knowledge in the fitness industry. *Sociology of Sport Journal*, 35(4), 358-366.
- Raven, S. (2018). Mind the gap: Sport management education and employability auto-ethnographical analysis of sport management education and the sports fitness industry. *Education+ Training*.
- Reitzug, U. C. (2002). School Reform Proposals: The Research Evidence. Retrieved from <http://www.asu.edu/educ/eps/ERPU/documents/ERPU%202002-01/Chapter%2012-Rei>
- Retar, I. (2014). *Development of model for sport manager competencies structure as a premise for lifelong learning*. Unpublished doctoral dissertation. In Slovenian. Koper: University of Primorska. Faculty of Education.
- Retar, I., & Bardorfer, A. (2018) Fitness manager's lifelong learning model. *Movement in Human Life and Health*, 251.
- Rosado, A., Araújo, D., Mesquita, I., Correia, A., Mendes, F. and Guillén, F. (2013). Perceptions of fitness professionals regarding fitness occupations and careers: A phenomenological analysis. *Revista de Psicología del Deporte*, 23(1), 23-31.
- Rothschild, M.L., (1999). Carrots, sticks, and promises: A conceptual framework for the management of public health and social issue behaviors. *Journal of Marketing*, 63(4), 24-37.
- Salehi, H., Mohammadi, F., & Mohammadi, H. (2014). Relationship between Management Skills and Customer Experience Management. *Indian Journal of Science and Research*, 7(1), 626-634.
- Shang, H. & Yu, W. 2013. Assessing Chinese managerial competencies from different perspectives. *Social Behavior and Personality* 41(9), 1469–1486. doi:10.2224/sbp.2013.41.9.1469
- Shirazi, A. & Mortazavi, S. (2009). Effective Management Performance A Competency-Based Perspective. *International Review of Business Research Papers* 5(1), 1–10.
- Shyr, W. J. (2017). Developing the principal technology leadership competency indicators for technical high schools in K-12 in Taiwan. *Eurasia Journal of Mathematics, Science and Technology Education*, 13(6), 2085-2093.
- Smutny, P., Prochazka, J. & Vaculik, M. (2014). *Developing Managerial Competency Model*. Hradec Economic Days 2014: Economic Development and Management of Regions, Pt V (February): 309–315.
- Teik, D. O. L. (2015) Enhancing the experience of needs satisfaction through service engagement: A case of commercial fitness Centres in Malaysia, *Journal of Global Scholars of Marketing Science: Bridging Asia and the World*, 25(2), 109-121, DOI: 10.1080/21639159.2015.101280.
- Torki, A., Shouriche, M. H., & Meshgati, M. R. (2011). Study of Manager's Stress: Political Skills and Escape from the Pressures of Management Letters. M
- Tyrańska, M. 2016. Managerial Competencies for Various Management Levels. *Zeszyty Naukowe Uniwersytetu Ekonomicznego w Krakowie* 11959): 21–38. doi:10.15678/znuek.2016.0959.1102
- Yusof, A., Joseph, J., & Shah, P. M. (2017). Customer's expectation, perception and satisfaction with service quality of a fitness center in Malaysia. *International Journal of Physical Education, Sports and Health*, 4(1), 146-150.