The Effects of Service Quality on Customer's Satisfaction in Low-Cost
Fitness Center in Semarang, Indonesia

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ผลกระทบของคุณภาพการบริการต่อความพึงพอใจของลูกค้าในศูนย์ออกกำลังกายราคาประหยัดในเมืองเซมารัง ประเทศอินโดนีเซีย

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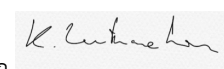(Juta Tingsabhat, Ph.D.)

สุฮัตมาน:

ผลกระทบของคุณภาพการบริการต่อความพึงพอใจของลูกค้าในศูนย์ออกกำลังกายราคาประหยัดในเมืองเซมารัง ประเทศอินโดนีเซีย. (The effects of Service Quality on Customers's Satisfcation in Low-Cost Fitness Center In Semarang, Indonesia.) อ. ที่ปรึกษาหลัก: กวีพงษ์เลิศวัชรา

การศึกษานี้มีวัตถุประสงค์เพื่อวิเคราะห์ระดับและผลกระทบของคุณภาพการบริการต่อความพึงพอใจของลูกค้าการวิจัยได้รับการออกแบบให้เป็นการศึกษาเชิงปริมาณโดยใช้เทคนิคการสุ่มตัวอย่างโควต้า(สุ่มตัวอย่างไม่น่าจะเป็น) รวบรวมผู้ตอบแบบสอบถามทั้งหมด 420 คนจากศูนย์ออกกำลังกาย 14 แห่ง วิเคราะห์ข้อมูลด้วยค่าร้อยละ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน และการวิเคราะห์การถดถอย ผลการวิจัยพบว่าความเชื่อมั่นความเห็นอกเห็นใจความน่าเชื่อถือและการตอบสนองของคุณภาพการบริการที่รับรู้มีมูลค่าบริการที่สูงกว่าที่คาดไว้ในทางกลับกันสิ่งที่จับต้องได้เป็นเพียงมิติเดียวที่ขาดความคาดหวังของลูกค้าผลการวิจัยชี้ให้เห็นถึงความสัมพันธ์เชิงบวกระหว่างคุณภาพการบริการและความพึงพอใจโดยรวมสี่ตัวแปร;คือมิติที่จับต้องได้มิติแห่งความเห็นอกเห็นใจชั้นเรียนส่วนบุคคลและสมาชิกภาพซึ่งสัมพันธ์ในทางบวกกับความพึงพอใจโดยรวม

สาขาวิชา	วิทยาศาสตร์การกีฬาและการออกกำลังกาย	ลายมือชื่อนิสิต ....
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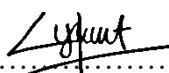
This study aimed to analyze the level and the effects of service quality on customer satisfaction. The research was designed as a quantitative study with a quota sampling technique (non-probability sampling). A total of 420 respondents were collected from 14 fitness centers. Data were analyzed by percentage, mean, standard deviation and regression analysis. The results revealed that assurance, empathy, reliability, and responsiveness of perceived service quality had a higher value than expected service quality. On the other hand, tangible was the only dimension fell short of customers' expectation. The results indicate a positive relationship between service quality and overall satisfaction. Four variables; namely tangible dimension, empathy dimension, personal class, and membership positively related to the overall satisfaction.
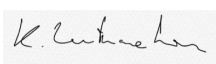
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CHAPTER 1

INTRODUCTION

1.1 Research Background

In the last few decades, the sports industry has been rapidly growing around the world. Fitness industry as a part of sports industry has also grown tremendously in participation and interest in the worldwide (Dias et al., 2019). Nowadays, the number of people who have joined a fitness center have risen significantly. Based on the data, health clubs in 2017 attracted 174 million members around the world and also generated total industry revenue $87.2 billion (USD) (IHRSA, 2018a). Meanwhile, health clubs in 2018 attracted 183 million members around the world and industry revenue totalled an estimated $94 billion (USD) which have exceeded 210,000 facilities (IHRSA, 2019). It also happened in Indonesia that the growth of fitness centers increased. According to the newer report (IHRSA, 2018b), health clubs in Asia – Pacific including fourteen countries such as Australia, China, Hongkong, India, Indonesia, Japan, Malaysia, New Zealand, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam attracted 22 million members and also attracted $16.8 billion (USD). Based on that data, Indonesia has grown (0.18%), respectively.

Specifically, the customers of fitness centers in Semarang city have increased significantly as well. Interestingly, the customers are not only teenagers and adults but also customers who are around 60 years old (Aprianto & Sugiharto, 2020). Basically, Semarang city is categorized as one of the biggest cities in Indonesia which is located in Jawa Tengah province. According to Fafurida & Oktavilia, (2020), Semarang city is always growing well in the economic sectors. Furthermore, Semarang city is the main support of Jawa Tengah's economic growth. In 2015, Semarang city's economic growth rate was recorded at 5,7%, while the province of Jawa Tengah was 5,4%. Moreover, when the economic growth of Jawa Tengah decreased to 5,2% in 2016, Semarang city increased up to 5,8% (Yunita, 2017). Principally, the economic growth was caused by the number of investors who have come to invest in Semarang city, such as in the property, vehicle, food, and also sports industries (Thenu, 2019). In the sports industries, mainly in fitness businesses have increrased as well. For example, there are

well-known fitness centers that have been built in Semarang such as Celebrity Fitness, Fitness First, Refit, etc. In addition, due to the increasing level of participation and interest in Semarang city in 2018, there was a new well-known fitness center in Indonesia that has built in Semarang, namely Fitnation (Kampusnesia, 2018).

On the other hand, there are dozens of low-cost fitness centers that scattered throughout the sub-districts in Semarang city (Nanda et al., 2020). Mostly, they have been built before the popular fitness centers built in this city such as Anhesa, Jokitos, Pion fitness center etc. Interestingly, they still exist until now and many customers still exercise there. In order to understand more about low-cost fitness center, here are a few characteristics of low-cost fitness center, such as the ability to operate a fitness center with one person as staff, a gym-only proposition, a limited fitness equipment, prices are set at least 50% lower than the industry average (Arroyo et al., 2020).

Basically, there are a plenty of reasons people visiting fitness center. According to Sassatelli (2014) most of people have visited fitness center because they wanted to have a better body shape and lose their weight. Currently, in Semarang city, the awareness of healthy lifestyle of community continues to increase significantly, one of the factors is being overweight and obesity (Mariza & Kusumastuti, 2013). For example, there is an extreme obesity case in Semarang. His name is Bimo Putro Prakoso, 22 years old and his weight is 250 kilograms and he could not do normal activities every single day (Endra, 2019). In this case, according to Kusumasari and Dwiyanto, (2013) , the level of interest and participation in Semarang city's fitness center increased because they need to have a better body shape and lose weight.

On the other hand, in order to support Semarang people to lose their weight and get healthier, the government of Semarang always created agenda such as mass dancing with residents annually in the term of celebrating Semarang city's anniversary (Radar Semarang, 2019). Moreover, based on the main objective that is to develop sports promotion programmes, the government of Semarang city also has encouraged the community to play sports such as exercise by facilitating outdoor fitness equipments. There are 10 fitness equipments such as Lat Pull Down Two Seat, Double Sit up Board, Double Leg Press, Rowing Machine, Single Pole Parallel Bars, Three Waist Swivel, Body Pulling Training, Cycle, Horse Rider Machine and Elliptical Machine for public (Fajlin, 2020a). On the other hand, there are a number of low-cost fitness centers that

have been built in Semarang city. However, public fitness provided by government will interfere with low-cost fitness centers business. Basically, every fitness center has the main objective, which is to generate revenue as much as possible. To compete in this industry, the owners of fitness center essentially should enhance operations and management processes to enlarge service quality (Tsitskari et al., 2014).

Currently, the competitive markets in fitness centers are trying to achieve the advantage over competitors to get as many customers as possible. Since competition among fitness centers is high, customer's satisfaction becomes crucial part of this business (Fernández et al., 2018). If fitness centers cannot whether fulfill customer's needs or expects, it will be difficult to succeed in a customer-oriented market. The service provided by fitness centers is also an important part of customers choice. According to Kim et al., (2016), in order to attract fitness center's customers and keep them coming back, fitness center should understand how customers evaluate what they perceived and expected. Basically, Service quality is defined as the discrepancy between customer's service perception and expectations (Parasuraman et al., 1988).

Service quality becomes necessary for fitness center to create strategies that they should prioritize the concept of quality in order to survive in this environment (Zardo et al., 2018). On the other hand, service quality is considered one of the best tools to maintain and increase the number of customers and also to generate sustainable income (Dias et al., 2019). In addition, the service quality has an important role as demonstrated by service marketing literature (Lim et al., 2016). Basically, service quality assessments are an important step in the development program to improve the quality in the fitness centers (Najafzadeh et al., 2015). Yildiz et al. (2018) explained that one of the most challenging things in fitness center is maintaining customers. According to Jasinskas et al., (2013), in order to meet customer satisfaction, what service providers need to do is provide services not only to fulfill the established standards but also should exceed customer expectations. In addition, according to Afthinos et al., (2005) to meet the expectations of customers are an important element in the organization's efforts to retain its customers and gain competitive advantage. When the customers receive good services from the fitness center, customers will tend to stay with their fitness (Wei et al., 2010). On the other hand, when the customers perceive the service is not as expected, customer will feel dissatisfied with the service provided by fitness center.

Furthermore, according to Zeithaml et al., (2006), service quality has been recognized as one of the main elements to affect the satisfaction of customers. In this case, in order to find out the level of service quality, it will be measured by finding the gap between customer expected service quality and customers perceived service.

As aforementioned, service quality is the discrepancy between customers' expected service and customers' perceived service (Parasuraman et al., 1988). According to Diaz et al., (2019) service quality is a crucial strategy in fitness center to increase the level of customer satisfaction and maintain the customers keep coming back. According to Fernandez et al., (2018) there is a positive relationship between service quality and customer's satisfaction in low-cost fitness center. In this case, in order to investigate what the customers expected from services, this study worked on examining service quality and satisfaction by finding the gaps between what customer expected and what customer perceived from services and then examined it with customer satisfaction.

Basically, low-cost fitness centers were spread across Semarang city which offered a limited of equipment and staff. Moreover, quality of service was indicated as the major core of low-cost fitness center (García-Fernández et al., 2018). Besides that, it was crucial understanding how satisfied the customer were. In this case, fitness centers have increased and have become popular in Semarang, Indonesia (Fajlin, 2020b). Conscious of the need to reach a competitive advantage, the owners should understand what the customer expected and perceived from service and its effect on customer satisfaction. On the other hand, there was lack of studies about understanding the customers in low-cost fitness center. Hence, this research was needed to explore in detail which components of service quality could contribute more significantly to customer satisfaction. There was also no one that has investigated the service quality and its affects with customers satisfaction in fitness center in Semarang city, Indonesia. This study worked on how the gaps between expected service and perceived service affected customer's satisfaction in fitness centers in Semarang, Indonesia, so that researcher could help to improve the fitness centers which might bring success to the owners.

1.2 Research Objective

1. To analyze the level of service quality (expectation and perception).
2. To study the effects of service quality on customer satisfaction.

1.3 Research Question

Research Question 1: What is the current level of service quality (expectation and perception) in low-cost fitness center in Semarang city, Indonesia?

Research Question 2: Does the service quality affect customer's satisfaction in low-cost fitness center in Semarang, Indonesia?

1.4 Research hypothesis

Hypothesis 1: The current average level of service quality (expectation and perception) in low-cost fitness centers in Semarang, Indonesia is different.

Hypothesis 2: The service quality affects customer satisfaction in low-cost fitness center in Semarang, Indonesia.

1.5 Scope of Study

1.5.1 Population and Sample

The scope of this research was limited to customers of low-cost fitness centers in Semarang, Indonesia. It was also limited to five dimensions of service quality such as the dimension of tangibility, reliability, responsiveness, assurance, and empathy and its effect on customer's satisfaction. According to Department of Population and Civil Registration Semarang city, (2020), total a population of 1,674,328 people is Semarang residents. However, due to the lack of data, the population in fitness center in Semarang, Indonesia is unknown population. Hence, the sample was calculated by Cochran's sample theory. The sample of this study was consisted of 420 people.

1.5.2 Variable in this study include

- Independent variable was service quality.
- Dependent variable was customer satisfaction

1.6 Operational Definition

The following are some operational definitions used in this study:

– Service quality refers to discrepancy between expected service and perceived service in low-cost fitness center in Semarang, Indonesia.

– Expectation is defined as a representation of their demands about services in fitness center before receiving services in low-cost fitness center in Semarang, Indonesia.

– Perception refers to what the customer receives from service encounters in low-cost fitness center in Semarang, Indonesia.

– Customer satisfaction refers to the customers' overall feeling of happiness with a purchase transaction in low-cost fitness center in Semarang, Indonesia.

– Low-cost fitness center refers to fitness center which has few characteristics such as the ability to operate an entire fitness center with one person, a gym-only fitness center, a limited fitness equipment, prices are set at least 50% lower than the premium fitness centers.

– Tangibility refers to the tangible or physical dimension of service, such as equipment, facilities, appearances of staff in low-cost fitness center in Semarang, Indonesia.

– Responsiveness refers to willingness to help customers by performing service promptly and support customers' need constantly in low-cost fitness center in Semarang, Indonesia.

– Reliability refers to the ability to provide the service based on promise to customers in low-cost fitness center in Semarang, Indonesia.

– Assurance refers to the knowledge and courtesy of employees and their ability to offer the service by providing the service with a good skill to customers in low-cost fitness center in Semarang, Indonesia.

– Empathy refers to the ability to give the individualized attention to customers in low-cost fitness center in Semarang, Indonesia.

CHAPTER 2
LITERATURE REVIEW

In this section, related articles and relevant research have been reviewed. There were seven parts which were described below:

1. Service Quality

   - Customer Expectation

   - Zone of Tolerance

   - Customer Perception

2. The Instruments of Service Quality and its dimension for Fitness Center

3. SERVQUAL and SQAS Instrument

4. Customer Satisfaction

5. Fitness Center in Semarang

6. The Studies on Service Quality and Customer's Satisfaction

7. Conceptual Framework

2.1 Service Quality

Basically, service quality is elusive because there are three characteristics of service quality such as intangibility, heterogeneity, and inseparability. In the service quality, intangibility is difficult to understand how customers perceive and evaluate service quality, and heterogeneity is difficult to assure because what the companies intend to deliver may be different from what the customers receive, and also in the inseparability, production and consumption of many services are inseparable (Parasuraman et al., 1985). Therefore, to understand more about service quality, there are some definitions of service quality. Service quality is defined as service quality is the discrepancy between customers' expected service and customers' perceived service (Parasuraman et al., 1988). Service quality is the comparison between the customer's expectations and perceptions about the service company (Oliver, 1997). Moreover, Gronroos, (1984) described that "expected service is influenced by previous experiences meanwhile perceived service is the evaluation of the service received at the time of delivery in relation to those previous expectations. Lewis and Booms (1983) argued that service quality is a measurement of how well the service level delivered

matches customer expectations. In this case, we could conclude that the definition of service quality is focused on discrepancy between customers' expected service and customers' perceived service.

In this case, in order to understand, improve, and measure service quality, Parasuraman et al., (1985) identified five discrepancies of service quality gap. The five dimensions of service quality gaps as follows:

a. Gap 1: The gap between customer expectations and management perceptions of consumers expectations.

b. Gap 2: The gap between management perceptions of consumer expectations and the company's service quality specifications.

c. Gap 3: The gap between service quality specifications and service delivery.

d. Gap 4: The gap between service delivery and external communications.

e. Gap 5: The gap between perceived service quality and expected service quality.

The gap analysis model is a management guide to determine for the service quality problem and discovering appropriate ways to close the gaps. However, this study is focused on the gap 5: the gap between perceived service quality and expected service quality.
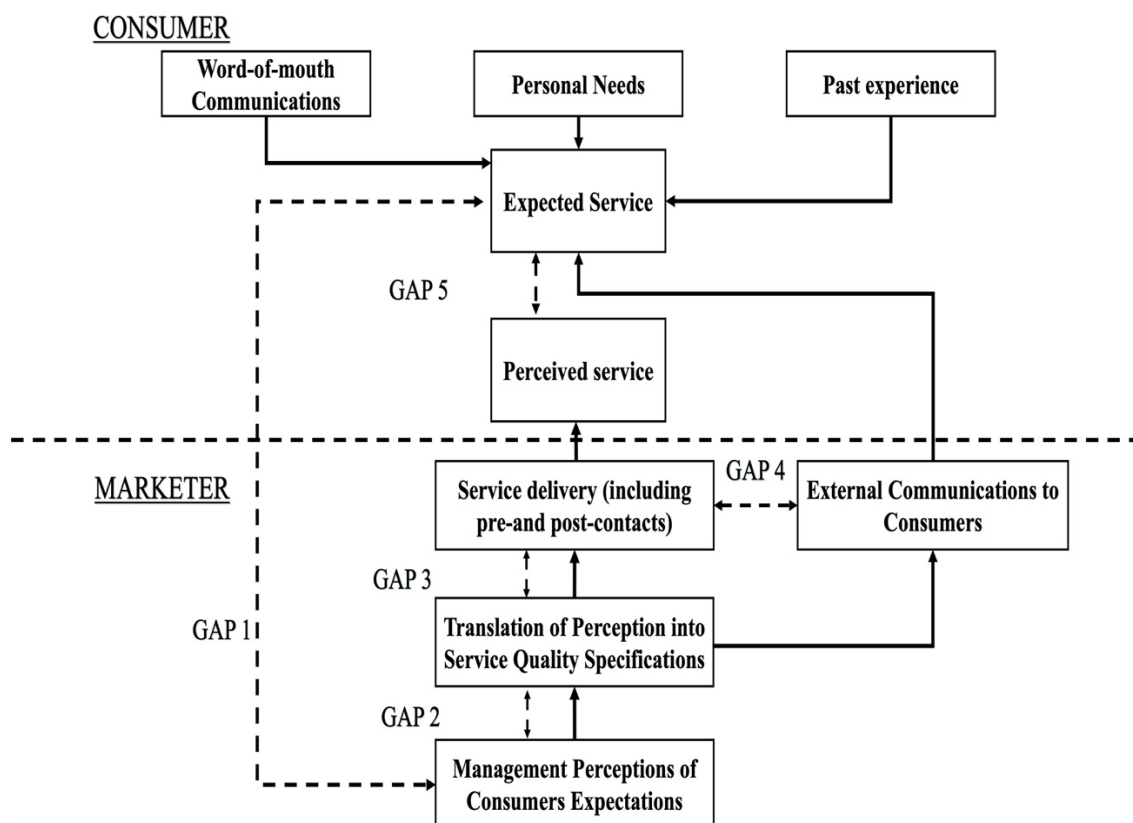
Figure 1 Conceptual model of service quality (Parasuraman et al., 1985)

Nowadays, the fitness market is growing rapidly and becoming more competitive (Teik, 2015). The service quality of fitness will play a big role to attract customers. In addition, extraordinary service quality is the key for any organization to have a competitive advantage (Yusof et al., 2018). According to Parasuraman et al, (1985), quality of service is a service provided to customers regarding all evaluation that similar to attitude. In this case, the service quality provider should create their own ways to have a high-quality image to customers. Many studies have indicated that service quality has a significant influence to customer trust and satisfaction (Šíma & Ruda, 2019). Service quality is also important because it has been proven to be related to cost efficiency for a fitness center (Yusof et al., 2017). Currently, fitness center becomes more competitive industry in the two last decades, the field of service quality has also significantly increased consumers attention (Soygüden et al., 2015). Hence, the managers of fitness centers should be able to focus on the services to customers to create a good relationship with customers.

2.1.1 Customer Expectation

Nowadays, a number of customers are not satisfied when they buy goods or services, it happens because what they need is not fulfilled by their expectations. When the service performance from fitness center exceeds the customer expectations, customers are satisfied but when the service performance is below their expectations, the service quality is considered as unacceptable (Beytell, 2010). Customer expectations are something that consumers believe about service delivery which is used as a standard or reference points against the judgement of performance (Zeithaml et al., 2006). According to Du Plessis et al. (2007), customer expectations is defined as beliefs about the performance of a product or services, this concept is also described as the desired product or service outcome.

According to Hoffman and Bateson, (2006), there are three types of customer expectations, such as predicted service expectations, desired services expectations and adequate service expectations.

1) Predicted service expectations refer to a probability expectation that reveal of service customers believe is likely to occur (Hoffman & Bateson, 2018).

2) Desired service expectations, Hoffman and Bateson, (2006) stated that the desired service expectations that express what customers really want from the service encounter. Zeithaml and Bitner (2003), also described the desired service expectation as the level of service customers hope to receive; the "wished for" level of performance. Desired service is a blend of what the customers believe "can be" and "should be". Principally, in desired service expectations are lower than predicted service expectations.

3) Adequate service expectations refer to a minimum tolerance expectation and reflect the level of service the customer is willing to accept (Zeithaml et al., 2006). Wilson et al. (2008), also state that adequate service directly appoints to the level of service that the customer will tolerate and suggests the minimum tolerable service expectation.

According to Wilson et al., (2008), the first and most basic step that should be taken in providing quality service delivery is understanding all that the customer expects. Principally, every individual has different expectation. On the other hand, when the service performance from fitness center exceeds the customer expectations,

customers are satisfied but when the service performance is below their expectations, the service quality is considered as unacceptable (Beytell, 2010). According to Bozorgi, (2007), service quality is focused on meeting the customers' needs, requirements, and how well the service delivered matched the customers' expectations. Beytell, (2010) stated that, in order to make them satisfied, a fitness center needs to ensure that they exceed customer expectations because every single customer has their own expectations about the service.

2.1.2 The Zone of Tolerance

The zone of tolerance refers to a quality level that ranges from high to low which reflects the difference between desired service and adequate service (Hoffman & Bateson, 2018). In any case, if services under adequate service expectations level, the minimum level is considered admissible by customers, then they will be dissatisfied with the company. On the other hand, if the service performance is higher than the zone of tolerance, where the performances exceed desired service, customers will be highly satisfied and may also be surprised (Zeithaml et al., 2006). In this case, it could be concluded, when it falls outside of the range (either very low or very high), the services will get a huge attention from the customers whether positive or negative.
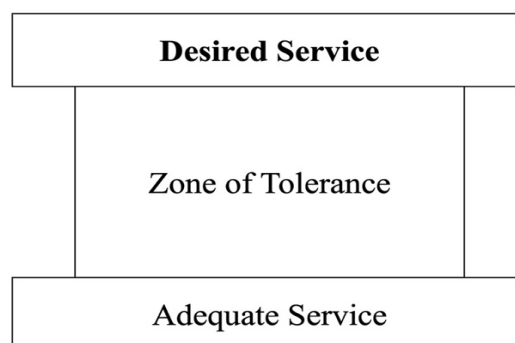
Figure 2 Zone of Tolerance, (Hoffman & Bateson, 2018)

In any case, managers of fitness center should understand what the customers' needs are, and whether customer expectations are met or not (Hoffman & Bateson, 2018). On the other hand, managers need to understand the factors that influence customer expectations in the fitness center as well, because the expectations of customers have an important role in the evaluation of service (Beytell, 2010).

Therefore, it is a huge homework for any service provider to offer a level of service that exceeds the desired service.

2.1.3 Customer Perception

In the term of customer perception, Gronroos (1984); Parasuraman et al. (1985) have stated that customer perception of service quality is based on the comparison of their expectations (what they want service provider should offer) with their perception of the performance of the service provider. Perceptions of customer are based solely on what they receive from service encounters. It is important for fitness center to understand the customers' needs and provide services that meet the customers' needs.

Gronroos (1984) indicated that good perceived quality is obtained when it meets the expectations of customers. If the customer expectations are unrealistic, the total perceived would be low. Fitness center is a part of service industries, therefore, when the customer perception is higher than customer expectation the customers are indicated that the customers accept the service provided by fitness center. In addition, Tsitskari et al. (2014) stated that positive perception of service quality lead to stronger satisfaction which in turn leads to customer loyalty as well. Hence, in order to improve the fitness center in the service quality, the researcher work in this study.

2.2 The Instruments of Service Quality and Its Dimensions for Fitness Center

Recently, there are several service quality instruments that are most frequently used to measure quality of service in the fitness center i.e., SERVQUAL, Rust and Oliver, QUESC, Brady and Cronin, and SQAS scale (Howat & Assaker, 2013, Lim et al., 2016, Jasinkas et al., 2013, Polyakova & Mirza, 2015, Yusof et al., 2018). Basically, it is an arduous task to identify service quality dimension because many researchers have different models and theories on the service quality dimensions. Every researcher has several different views regarding the service quality dimensions, such as 1) SERVQUAL scale has five dimensions, Parasuraman et al., (1988), 2) Rust and Oliver scale has three dimensions, Rust and Oliver (1994), 3) QUESC scale has 11 dimensions, Kim and Kim, (1995), 4) Brady and Cronin scale has three dimensions, Brady and Cronin, (2001), and 5) SQAS scale has six dimensions, Lam, et al., (2005). The following is more detailed explanation of the instruments:

a) **SERVQUAL**

SERVQUAL scale is a tool for measuring service quality that was developed by Parasuraman et al., (1988). It has been applied in a number of studies of service quality in throughout the world, such as measuring service quality in the fitness center, bank, hospital, retail businesses etc. (Howat & Assaker, 2013; Yildiz, 2011; Yousapronpaiboon, 2014). According to Parasuraman et al., (1988) SERVQUAL can be applied to measure the level of service in different companies. Hence, it is helpful to help the business manager to measure the quality of service in a company. SERVQUAL scale has been developed for measuring expectations of service quality and perceptions of service quality. In addition, SERVQUAL has high validity and reliability measurement (Parasuraman et al., 1988). The following are the SERVQUAL dimensions and descriptions:

- Tangible dimension is related to physical stuff, such as equipment, facilities, and appearance of personnel.
- Reliability dimension is defined as the ability of staff to perform the promised service dependably and accurately.
- Responsiveness dimension is defined as the willingness to help customers and provide prompt service.
- Assurance dimension refers to knowledge and courtesy of employees and their ability to inspire trust and confidence.
- Empathy dimension refers to the ability to provide the individualized attention to costumers.

There are five dimensions of SERVQUAL, however there are three original dimensions and two combined dimensions. In the two last dimensions which are assurance and empathy have represented seven original dimensions, i.e., communication, credibility, security, competence, courtesy, understand/knowing customers, and access. Therefore, SERVQUAL has five dimensions but it contains 10 dimensions (Parasuraman et al., 1988).

b) Rust and Oliver

Another service quality measurement is Rust and Oliver scale. Rust and Oliver scale was developed by Rust and Oliver (1994). It has three quality dimensions. The following are the dimensions and descriptions of Rust and Oliver scale:

1. Service product, it is consisted of what the consumers get as an outcome of services and consumer perception of these services.

2. Service environment, there are two factors (internal environment and external environment). Internal environment focused on organizational culture and the main philosophy brought to service provision by management. External environment focused on the physical ambience of the service setting.

3. Service delivery, it can be linked to role performances. This is the process of consumption by giving a service to consumer in the event (Rust & Oliver, 1994).

In this model, it is support for measuring overall quality which is measured about perceived service quality (Fernández et al., 2018) . Moreover, many researchers used Oliver model to measure customers satisfaction rather than using the Oliver scale to measure service quality, (Fernández et al., 2018; Lim et al., 2016; Moreira & Silva, 2016; Šíma & Ruda,2019; Tsitskari et al., 2014). On the other hand, Rust and Oliver scale needs to be considered to improve the model and equip it with deeper theory to more understand to concept of service quality (Polyakova & Mirza, 2015).

c) QUESC (Quality Excellence of Sport Center)

There is an instrument for measuring service quality in a sport industry that is QUESC (Quality Excellence of Sport Center). The QUESC instrument was developed by Kim & Kim (1995). It is an instrument to determine service the customers want to get in order to meet the expectations of customers (Jasinskas et al., 2013). Unlike other service quality instruments, QUESC is designed to assess the performance of sport centers based on costumer desires (Kim & Kim, 1995). They developed QUESC from the SERVQUAL instrument. According to Tsitkari et al., (2006), QUESC instrument is a specific scale for measuring service quality in fitness centers. Entirely, there are 33 service quality items in QUESC which are grouped into 11 dimensions such as 1) ambiance, 2) employee attitude, 3) employee reliability, 4) available information, 5) offered programs 6) personal considerations, 7) price, 8) privileges, 9) ease of mind, 10) stimulation, 11) convenience.

According to Jasinkas et al., (2013), the program offered in the QUESC model is the main thing that is important for customers because this dimension includes attributes such as program innovativeness, variety, socialization that are important not only for individual clients but also families. Furthermore, the QUESC instrument is not

only intended as a measure of customers perceptions of service quality but could also serve as an important part of a quality improvement program (Kim & Kim, 1995). On the other hand, there are few weaknesses of its model as follows:

1) In the price, privilege and stimulation had only one item, the stability of a single item factor would be questionable (Lam et al., 2005),

2) Not all items are clear,

3) More interest is given to constant items, while new items are not studied (Jasinskas et al., 2013).

In addition, according to Papadimitriou and Kartertoliotis, (2000), QUESC instrument was used to assess the expectations of service quality in private Greek sport centers and fitness centers. The study revealed that 11 dimensions QUESC failed to measure service quality expectations. A FITSSQ (Fitness and Sport Service Quality) instrument with four dimensions consisting of 1) Instructor quality, 2) Facility Attraction and Operation, 3) Program Availability and Delivery, and 4) Other Services was developed to measure service quality in Greek (Papadimitriou & Karteroliotis, 2000).

d) Brady and Cronin

Brady and Cronin's scale was developed by Brady and Cronin, 2001. This is one of the models for measuring service quality in the fitness center. The following are the dimensions and subdimensions of Brady and Cronin model:
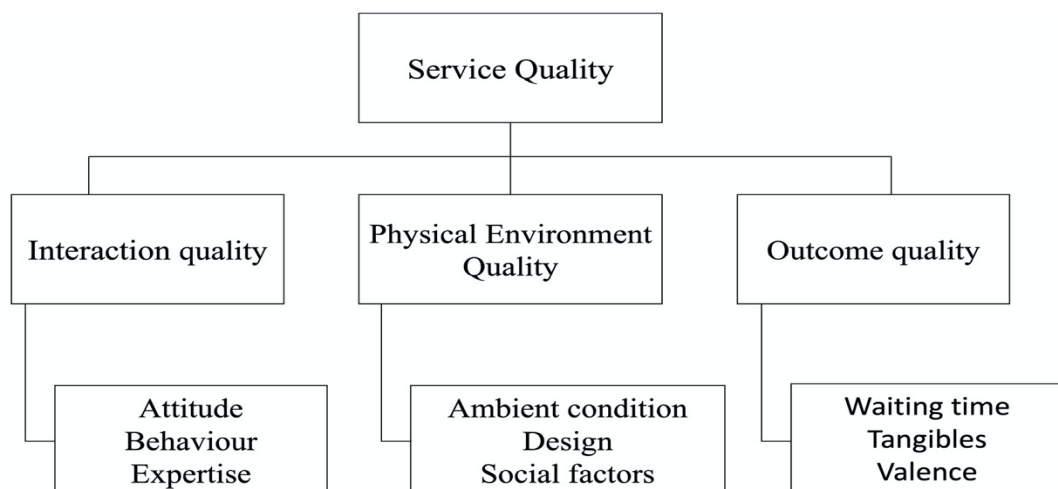
Figure 3 Dimensions of service quality (Brady & Cronin, 2001)

Brady and Cronin have combined the service quality model from Rust and Oliver (1994) and Dabholkar et al., (1996) to develop their service quality's instrument. They described three particular dimensions that are interaction quality, physical environment, outcome quality and each of dimension has three subdimensions each of these dimensions, such as attitude, behaviour, and expertise in interaction quality dimension, ambient condition, design, and social factors in physical environment quality dimension, and waiting time, tangibles, and valence in outcome quality dimension. Brady & Cronin scale has a good point over the other service quality measurement tools, namely waiting time subdimension. In this case, in the waiting time subdimension could identify (1) whether waiting time is consistent, (2) the efforts made to minimize waiting times, and/or (3) whether the company recognizes customers' time constraints (Brady & Cronin, 2001)

According to Polyakova & Mirza, (2015), the Brady and Cronin model is a good measurement because it has better explanatory potential than earlier model. On the other hand, a researcher needs to combine between Brady and Cronin model and another model to measure service quality in a fitness center (Yarimoglu, 2014). In addition, according to Lam et al., 2005, the dimension program in the fitness center is one of the most important factors in the fitness center. Therefore, it needs to combine and/or need to adjust the model according to specific needs.

e) SQAS (Service Quality Assessment Scale)

Lam, Zhang, and Jensen, (2005) developed the SQAS (Service Quality Assessment Scale) in order to measure service quality. They developed a special SQAS instrument to measure service quality in health and fitness clubs. According to Lam et al., (2005), there are a 31-items scale with 6 dimensions such as, 1) Staff, 2) Program, 3) Locker Room, 4) Physical Facility, 5) Workout Facility, and 6) Child Care.

1. Staff

Nowadays, many companies recognize that the staff aspect is an important aspect to them. Moreover, staff aspect is an influential aspect which impacts customer satisfaction and repurchase goods or services (Namin, 2017). Staff represents the character of the organization and also promote the service directly to customer (Parasuraman et al., 1985).

2. Program

The program dimension is a major dimension in the SQAS model. In this dimension, the program includes a variety activities provided by fitness center (Lam et al., 2005). According to Howat & Crilley, (1996) the program should be included attributes like a variety of activities, on time programs, up-to-date information on activities, etc.

3. Locker Room

In this case, locker room is considered as a facility that is one of the important things for customers in the fitness center (Lam et al., 2005). In addition, according to Kim and Kim, (1995) locker room with a warm atmosphere is one of the major components in the Ambience.

4. Physical Facility

Basically, the researchers who studied service quality in an organization have recognized how highly important physical facilities are in evaluating service quality (Brady & Cronin, 2001; Kim & Kim, 1995, Parasuraman et al, 1988; Rust & Oliver, 1994). The physical facility in this study represents the physical environment of facility which refers to physical environment (Lam et al., 2005). This dimension contained physical facility attributes such as safe parking area, clean facilities, well organized center, and so on.

5. Workout Facility

Workout facility in the SQAS model is all about the equipment of fitness centers. in the workout facility dimension, there are five factors that categorize important such as, pleasantness of environment, equipment, adequacy of signs and directions, availability of workout facility/equipment, and overall maintenance.

6. Child Care

Nowadays, child care aspect in the fitness center is considered as important factors. In this case, there are three main factors in the child care dimension such as quality of child care staff, cleanliness of equipment of child care, diversity of experience provided. According to Lam, et al., (2005), in this millennial era, the child care factor is needed because of an increasing number of the health-fitness facilities, which is one of the concerns of customers.

Many researchers e.g., Khan, (2017), Moreira & Silva, (2016), Soyguden et al., (2015), Yusof et al., (2017) were used SQAS to assess service quality in the health and

fitness clubs. Even though they have implemented SQAS to measure service quality, they still needed to adjust this scale. In addition, they were dropped child care dimension because it was not provided by fitness center. On the other hand, child care is not provided by fitness center in Semarang.

2.3 SERVQUAL and SQAS Instrument

SERVQUAL is an instrument for measuring service quality that was developed by Parasuraman, et al., (1988). It has high validity and reliability measurement (Parasuraman et al., 1988). Moreover, SERVQUAL scale has been applied in many studies in the worldwide to measure the level of service quality in various companies such as in hospital, bank, retail businesses, airport, and others. There are many researchers e.g. Maksimović et al. (2017), Šíma and Ruda (2019), Zardo et al. (2018) etc. that have been applied SERVQUAL to measure service quality in fitness center as well. In addition, in spite of the fact that SERVQUAL is the most widely scale to measure service quality in the world, it is also can be applied in various companies because this scale is the most flexible to measure service quality (Meesala & Paul, 2018). Therefore, it is considered good instrument to measure service quality.

In this case, Parasuraman et al., (1988) identified ten overall dimension of service quality, such as tangible, reliability, responsiveness, communication, credibility, security, competence, courtesy, understand/knowing customers, and access. After refining their research through rigorous field testing, they refined their previous research and reduced the number of service quality dimensions from ten to five through data reduction technique. They developed and tested a multiple item scale namely SERVQUAL for measuring service quality. The following is the five dimensions of SERVQUAL:

1. Tangibility, it refers to the tangible or physical dimension of service, e.g., equipment, facilities, appearance of staff.
2. Responsiveness, it refers to willingness to help customers by performing service promptly and support customers' need constantly.
3. Reliability, it refers to the ability to provide the service based on promise to customers.

4. Assurance, it refers to the knowledge and courtesy of employees and their ability to offer the service by providing the service with a good skill to customers.

5. Empathy, it refers to the ability to adapt the service quality to the individual. It includes approachability and the effort to understand the customer's needs.

SERVQUAL scale has been developed for measuring expectations of service quality and perceptions of service quality. In addition, SERVQUAL has high validity and reliability measurement (Parasuraman et al., 1988). At the beginning, it has 97 pairs of items reduced to 22 pairs of items that measured both the level of customer expectations of service quality and actual service performance perceptions (Peitzika et al., 2020). According to Parasuraman et al, (1988), service quality (SQ = P – E), where SQ representing perceived quality, P representing perception and E representing expectation. In summary, they argued that service quality can be determined by measuring the differences between what a customer perceived that consumer received and what a customer expected. If P > E, indicated that service quality is high, and if P < E, indicated that service quality is low and also if P = E, indicated that service quality is adequate.

Basically, many researchers who have used SERVQUAL scale to measure service quality in fitness center e.g. Maksimović et al. (2017), Šíma and Ruda (2019), Zardo et al. (2018) still needed to adjust this scale. In this case, the researcher concerned in the tangible dimension of SERVQUAL. In order to make it appropriate, the researcher modified tangible dimension with SQAS developed by Lam et al. (2005). There are six factors of SQAS such as staff, program, locker room, physical facility, workout facility and child care. In this case, program, locker room, physical facility, and workout facility have been adding in the tangible dimension of SERQUAL. The staff and child care were not included in the tangible dimension because these are not counted as tangible dimension. On the other hand, the staff dimension of SQAS explained reliability, responsiveness, assurance and empathy (Lam et al., 2005). In addition, child care is not included in this study because it is not provided by low-cost fitness center in Semarang.

2.4 Customer Satisfaction

In the term of customer satisfaction, there are some definitions of customer satisfaction by experts. Customer satisfaction is defined as customers' reaction to circumstances fulfilment of their expectations and needs about products or services provided (Hallowell et al., 1996). Customer satisfaction refers to a person's overall feeling of happiness with a purchase transaction (Oliver, 1980). Thus, the customers feel that consumption fulfils some need, desire, goal or so on that is called pleasurable. On the other hand, when the customers feel that consumptions of a service provided by fitness center are not fulfilled, that is categorized as displeasure or a feeling of unhappy (Oliver, 1997). It is important to study customer satisfaction in fitness in order to find out how satisfy the customers are.

In the fitness center, many researchers e.g., Avourdiadou and Theodorakis (2014), Dias et al. (2019), Lim et al. (2016), Moreira and Silva (2016), Najafzadeh et al. (2015), revealed that customer satisfaction has been shown to have a significant relationship with service quality. Customer satisfaction is relevant to psychological outcomes deriving from a particular service experience (Hallowell et al., 1996; Oliver, 1996), while service quality is the gap between what customers expect and perceive about the services which is indicated positive or negative attitude towards services. Thus, the service business might be able to control a whole service quality but customer satisfaction in not under its control (Šíma & Ruda, 2019). In this case, Tsitskari et al., (2014) mentioned that the level of customer satisfaction is not only come from service quality but also come from other variables e.g., mood of customers, climate, social group of customers, culture, and others. Moreover, Haro-González et al., (2017) suggested that developing a masketing strategy is an important way to increase the positive satisfaction from service quality in the fitness center, e.g., improving in schedules and punctuality of services, imporving the facilities, developing the staff public relation training, updates of fitness's activities.

In recent studies, customer satisfaction is one of the most researched constructs due to its importance of business success. In the fitness centers, there are numerous of study measuring about customer satisfaction. According to Moreira and Silva, (2016), customer satisfaction is a critical thing because satisfied customers turn into loyal customers and ensure essential profitability for fitness centers. In this case, the

researcher measures customer satisfaction adopted the approach proposed by Oliver (1997). There are many researchers around the world e.g. Avourdiadou and Theodorakis (2014), Dias et al. (2019), Moreira and Silva (2016) who have measured customer satisfaction in fitness center proposed by Oliver scale.

2.5 Fitness center in Semarang

Nowadays, fitness center is familiar to everyone in the worldwide, this is also familiar for Indonesian. As mentioned above, Diaz et al., (2019) stated that the fitness industry has grown rapidly in participation and interest throughout the world. According to Statista, (2020), the user fitness center in Indonesia is 1.75 percent of population. Basically, the users of fitness center are considered very low. On the other hand, for these businessmen, this condition is an advantageous opportunity to develop a business of health club in Indonesia (Toarik, 2019). There is one of the famous fitness centers in Indonesia called the ReeFit gym which is located in several provinces in the java island such as in Bekasi city (West Java province), Gresik city (East Java province), South Jakarta city (DKI Jakarta province), Semarang city (Jawa Tengah province), Surabaya city (East Java province), and Tangerang city, (Banten province). Basically, it is categorized as one of the successful fitness centers in Indonesia. According to Toarik, (2019), Mela Gunawan, a Co-founder and Chief Marketing Officer of Reefit stated that a fitness center that he managed could generate net profits of up to 80 million rupiah (5,494 USD) per month in 2019 and he stated that this business has the potential to grow by up to 25% in 2020.

In the recent years, the fitness center in Indonesia is always growing up (IHRSA, 2018b). Furthermore, according to Statista, (2020), the revenue dan users in the fitness center from 2017 to 2019 always increased significantly. The following is the figure of revenue and users of fitness center in Indonesia:
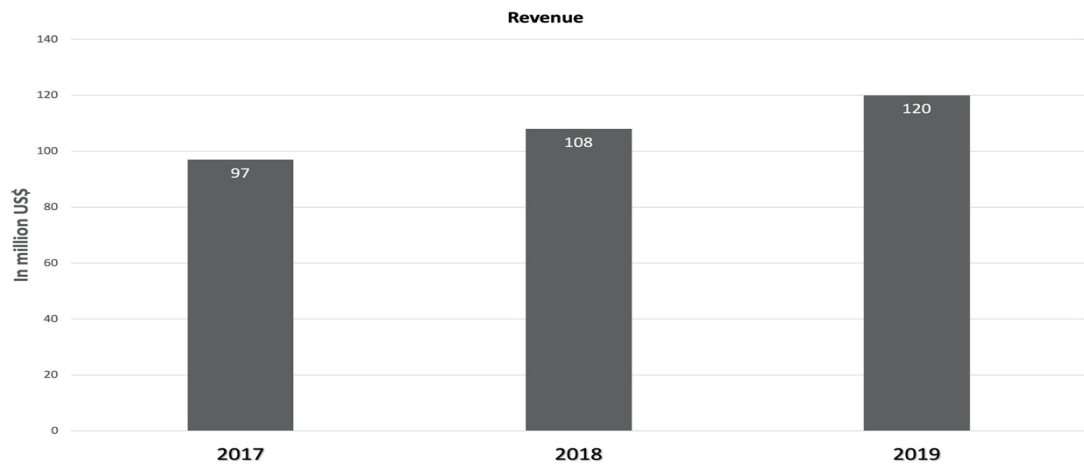
Figure 4 Revenue of fitness center in Indonesia (Statista, 2020)
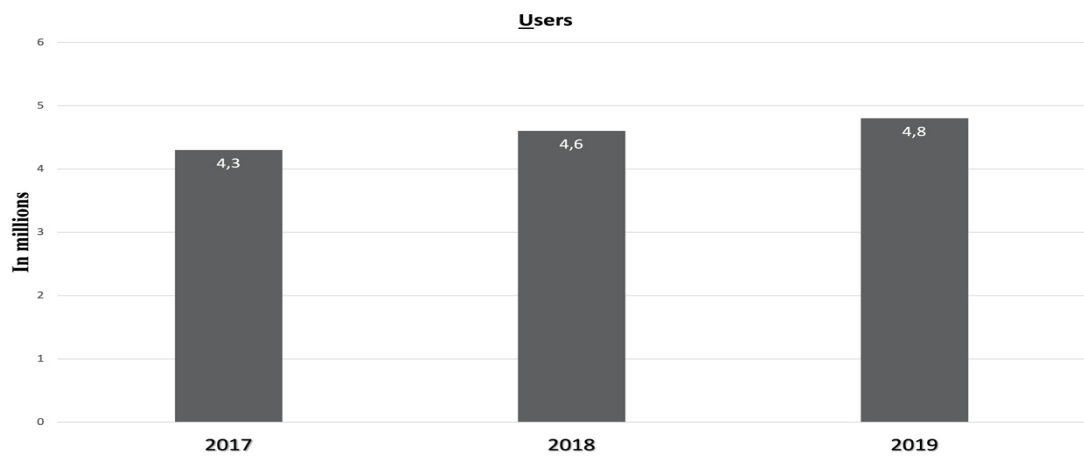
Figure 5 Users of fitness center in Indonesia (Statista, 2020)

According to National Development Planning Agency, (2019), currently, there are ten metropolitan areas as centers of national economic growth in Indonesia, and Semarang city is one of metropolitan cities in Indonesia. Semarang city is located in Java Island, Jawa Tengah province, Indonesia. In addition, Department of Population and Civil Registration Semarang city, (2020) stated that Semarang city is a sprawling metropolitan city with an area of 373.78 km^2 which has 1,674,328 million inhabitants. Currently, there is categorized a new fitness center in Semarang city which was built in 2018, namely Fitnation (Kampusnesia, 2018). Basically, Fitnation is a new fitness center in Semarang city but in the second year they reached more than one thousand

members (Fitnation, 2019). Based on this case, there are a thousand of Semarang people who are interested exercising in fitness center.

Currently, the awareness of healthy lifestyle of community continues to increase significantly in Semarang city, one of the factors is being overweight and obese (Mariza & Kusumastuti, 2013). In Semarang, there is an extremely obesity man called Bimo Putro Prakoso. He is 22 years old, and his weight is 250 kilograms as seen in figure 6. In his daily life, he could not do normal activities by himself, (Endra, 2019).
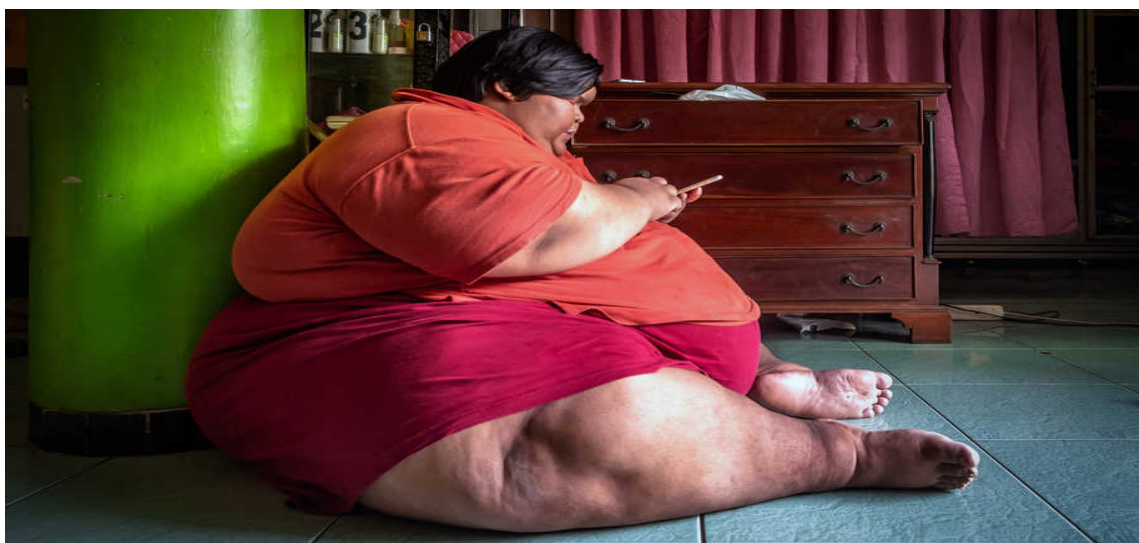
Figure 6 Bimo Putro Prakoso (Setiawan, 2019)

Furthermore, according to Ali, et al., (2019), one of the reasons why Semarang residents do not regularly exercise is because of bad weather. Those are some of the facts that Semarang residents exercised in the fitness center. In addition, other reasons such as to burn fat, to have a better body shape, and to relieve stress people exercise in fitness center (Kusumasari & Dwiyanto, 2013; Aprianto and Sugiharto, 2020). Currently, there are dozens of fitness centers including the low-cost fitness centers that scattered throughout the sub-districts in Semarang city. Besides to support the residents to be healthier, the owners of fitness centers realized that there is a great opportunity to gain profit in this field (Nanda et al., 2020).

Basically, there are some characteristics of Low-cost fitness center such as, the ability to operate a fitness center with one person as staff, a gym only proposition, a limited fitness equipment, prices are set at least 50% lower than the industry average (Arroyo et al., 2020). Even though low-cost fitness centers in Semarang provide a

limited of equipment, they offer personal class to maximize the functions of equipment. In this case, regarding the conceptualization of low-cost model, this is one of the ways to emphasize cost reduction, hire highly qualified staff and also produce the standard products in low-cost fitness center. García-Fernández et al. (2018) argued that using low-cost strategies in fitness center could have a competitive advantage and also could gain better profits.

However, due to lack of studies, there is no researcher who has conducted research about the effects of service quality on customer's satisfaction in low-cost fitness center in Semarang. In this case, commercial fitness center should come up with a strategy to keep its customers satisfied and coming back. Conscious of the need to reach a competitive advantage, the owners should understand what the customer expect and perceive from service and its effect on customer satisfaction. Therefore, in order to improve the fitness center which might bring success, the researcher have to conduct this study.

2.6 The Studies on Service Quality and Customer's Satisfaction

Hsueh and Su (2013) examined Service quality on customer's satisfaction. This study used survey research to collect data in fitness centers in Southern Taiwan. They were distributed 800 questionnaires, a total of 712 (89%) was valid questionnaires. They revealed that respondents have moderate agreement to the service quality and moderate satisfaction degree on the fitness centers in southern Taiwan. They also found that socio-economic backgrounds, such as occupation, educational level, monthly incomes, and participation economy have significant difference in the service quality and satisfaction context.

Avourdiadou and Theodorakis (2014) investigated the loyalty among novice and experienced customers of sport and fitness centers. A total of respondent was 426 customers in this study. The result indicated that service quality affects overall satisfaction both novice and experienced service. They also found that experienced customers have greater loyalty based on overall satisfaction, while novice customers have greater loyalty based on service quality.

Tsitskari et al. (2014) explored the relationship between service quality, customer satisfaction and psychological commitment in Cyprian fitness centers by

distributing 420 questionnaires and 315 were able to be used. They revealed that service quality affects to customer satisfaction, customer satisfaction affect to psychological commitment and also service quality has effect to psychological commitment.

Soygüden et al. (2015) conducted study about service quality level in fitness centers in Turkey. There were four dimensions in each perceived and expected service quality such as staff, program, locker room, and facility. The respondents were members of fitness centers with a total of 219 members. The data was collected by convenient sampling. The study discovered that the perception was lower than expectation. It was explained that all dimensions had a negative difference. Based on the result, program dimension has the lowest level of quality, afterwards locker rooms, staff and then facility.

Moreira and Silva (2016) conducted a survey among 204 members of Portuguese health club. The study provided understanding of service quality, customer satisfaction and word-of-mouth on complaint behavior in health club. They explained that service quality is a crucial key to satisfy the customer. They found that service quality has positive relationship on customer satisfaction, service quality has a positive relationship on word-of-mouth. On the other hand, they also revealed that there was a negative relationship between customer's satisfaction and word-of-mouth with customer's complaint behavior. Based on the result, even though dissatisfaction and low level of service quality could tempt customers to complaint to third parties and generate a negative word-of-mouth, there is no statistical significance.

Lim et al. (2016) studied about relationship among perceived value, service quality, customer satisfaction on customer loyalty in women's fitness club. A total of 221 women members were distributed questionnaires. Based on the multiple regression analysis, they revealed that customer perceived value, service quality, and satisfaction were significant influence customer loyalty.

Maksimović et al. (2017) conducted a study to discuss the service quality, customer's satisfaction and purchase intentions in the users of private ownership fitness centers in Serbia. There were 323 users in this study. They found that the cleanliness factor was the biggest gap between expected and received quality service, while the equipment was the smallest gap. Based on this research, it was shown that all dimensions of service quality have a positive correlation with customer's satisfaction.

In addition, the cleanliness and staff factors had a strong effect on customer's satisfaction that related to future purchase intentions in fitness center.

Yusof et al. (2017) distributed a total of 248 members in fitness center in Malaysia. The researchers studied about customer's expectation, perception and satisfaction with service quality of a fitness center in Malaysia. They used SERVQUAL scale to measure perceived and expected service quality, both of subscale contain 22 items with 5 dimensions such as tangibility, responsiveness, reliability, empathy and assurance. The results showed that expected service score was higher than perceived service. It is indicated that members in Malaysia need high services from fitness center. On the other hand, empathy and assurance were the most important dimensions for customer's satisfaction. However, all dimensions of service quality were found to have negative meaning, indicating that the members were dissatisfied the services provided by fitness center.

Fernández et al. (2018) examined fitness center consumer loyalty between non-profit and low-cost business in Spain. They explored the relationship among service, value, satisfaction and loyalty of client of public and low-cost fitness centers. a total of 1805 clients (753 clients from low-cost fitness and 1052 from public fitness) were distributed by convenient sampling. The study indicated that a greater weight in facilities and employees if quality perceived from private low-cost fitness centers, and the greater weight in programmes from public fitness centers. They also revealed that the relationships depend on the business model. The results indicated that both public fitness and low-cost private fitness have positive relationship among the variables' overall quality, perceived value and satisfaction and future intentions. Although both models have positive relationship, low-cost private fitness has greater relationship than public fitness.

Yusof et al. (2018) examined relationship between perception of fitness facility service quality and future intentions of fitness center users in Thailand. They distributed 250 campus recreation fitness center users including students and staffs from Mahasarakham University. The result showed that fitness facility service quality and overall facility service quality contributed positively toward predicting behavioral intention. The researchers stated that fitness centers users at Mahasarakham University

tend to renew their membership and recommend to others if they are satisfied with the fitness facility service quality aspects.

Dias et al. (2019) studied about the relationship between perceived service quality, satisfaction, and renewal intention in Portuguese fitness centers. A total of 263 respondents was distributed questionnaires in 2 fitness centers in North of Portugal. The indicated that service quality is a key strategy for increasing the level of customer satisfaction. They found that significant effect between perceived service quality and customer's satisfaction. They also found that customer's satisfaction has positive relationship with renewal intention.

2.7 Conceptual Framework

In this case, in order to measure expected service and perceived service in fitness centers, the researcher used the modified scale from Maksimović et al. (2017). Their instrument is based on work of the SERVQUAL scale originally developed from Parasuraman et al. (1988). In addition, SERQUAL scale has high validity and reliability measurement (Parasuraman et al., 1988). Moreover, SERVQUAL scale has been applied in many studies in the worldwide to measure the level of service quality in various companies such as in hospital, bank, retail businesses, airport, and others. There are many researchers e.g. Maksimović et al. (2017), Šíma and Ruda (2019), Zardo et al. (2018) etc. that have been applied SERVQUAL to measure service quality in fitness center as well. In addition, SERVQUAL is the most widely scale to measure service quality in the world, it is also can be applied in various companies because this scale is the most flexible to measure service quality (Meesala & Paul, 2018). Therefore, it is considered good instrument to measure service quality. There are five dimensions of SERVQUAL scale such as tangibility, reliability, responsiveness, assurance, and empathy. In order to suit the fitness center context, the tangible dimension of SERVQUAL was modified with SQAS originally proposed Lam et al. (2005). The workout facilities, programs, locker rooms, and physical facilities from SQAS were adding into tangible dimension as shown in the appendix 1.

On the other hand, to measure customer satisfaction, the researcher used the modified scale from Moreira and Silva (2016). Their instrument is based on work by Oliver, (1997). Beside its popularity to measure customer satisfaction in various

companies, there are many researchers around the world e.g. Avourdiadou and Theodorakis (2014), Dias et al. (2019), Moreira and Silva (2016) who have measured customer satisfaction in fitness center proposed by Oliver scale.

Expected Service
 - Tangibility
 - Reliability
 - Responsiveness
 - Assurance
 - Empathy
Adapted from Maksimović et al. (2017), Lam et al. (2005) and Parasuraman et al., (1988)

Perceived Service
 - Tangibility
 - Reliability
 - Responsiveness
 - Assurance
 - Empathy
Adapted from Maksimović et al. (2017), Lam et al. (2005), and Parasuraman et al., (1988)

Customer Satisfaction
Adapted from Moreira and Silva (2015) and Oliver, (1997)

Figure 7 Conceptual Framework

CHAPTER 3

RESEARCH METHODOLOGY

This chapter described the methodology used in the present study as follows:

1. Population & Sampling
2. Research design
3. Research Instruments
4. Data Collection
5. Data analysis

3.1. Population and Sampling

a. Population

The researcher was collecting data in fitness center in Semarang, Indonesia. According to Department of Population and Civil Registration Semarang city, (2020), there are a population of 1,674,328 people who are Semarang residents. There are 16 sub-districts with area of 373.78 km² that have been officially registered in Semarang city (Semarangkota, 2019). In this case, the number of the fitness center and its population in Semarang was unknown. Hence, the researcher used Cochran's sample size formula to estimate the sample in this study. The Cochran's sample size formula was described in sampling technique section. Basically, to understand more about Semarang city, the following is a map of Semarang city which includes the sub-districts:
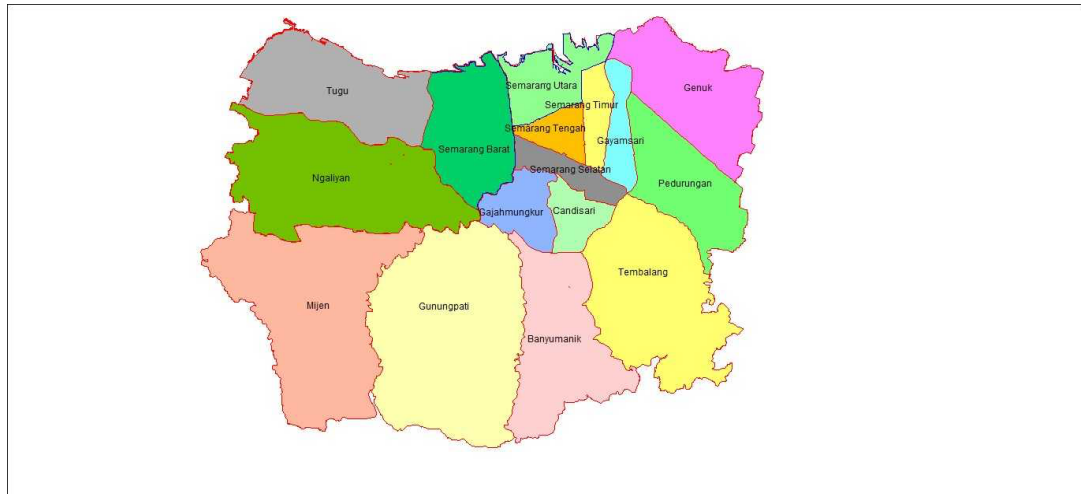
Figure 8 Semarang city map

The following attachment is a list of sub-district of Semarang city (Department of Population and Civil Registration Semarang City, 2020):

Table 1 list of sub-districts in Semarang city

No.	Sub-district
1.	Semarang Barat
2.	Semarang Timur
3.	Semarang Utara
4.	Semarang Selatan
5.	Semarang Tengah
6.	Gayamsari
7.	Gajah Mungkur
8.	Genuk
9.	Pedurungan
10.	Candisari
11.	Banyumanik
12.	Gunungpati
13.	Tembalang
14.	Tugu
15.	Ngaliyan
16.	Mijen

b. Sampling Technique

Due to the lack of research on fitness center in Indonesia, especially in Semarang, there is no detail information on the population size of the fitness center. Hence, the researcher used Cochran's sample size formula. The Cochran's formula is

considered particularly appropriate in situation with large population (Cochran, 1977). The following is the Cochran's formula where the degree of variability is unknown:

$$n_0 = \frac{Z^2\, pq}{e^2}$$

Where:
- n0 is the sample size
- Z is the selected critical value of desired confidence level
- p is the estimated proportion of an attribute that is present in the population,
- q is $1 - p$

In this case, the researcher has assuming the maximum variability, which is equal to 50% (p = 0.5) and taking 95% confidence level with ±5% precision. The following is the calculation for required sample size:

$$n_0 = \frac{Z^2\, pq}{e^2}$$

$$n_0 = \frac{(1.96^2)\,(0.5)\,(1-p)}{0.05^2}$$

$$n_0 = \frac{(1.96^2)\,(0.5)\,(1-0.5)}{0.05^2}$$

$$n_0 = \frac{(1.96^2)\,(0.5)\,(0.5)}{0.05^2}$$

$$n_0 = 384.15$$

$$n_0 = 384$$

The sample size consisted of 384. However, it was added 5% sample to prevent some errors in the questionnaire consisting of 19 participants, so the total of respondents was 403. In order to make it simple, the researcher has distributed the questionnaires to 420 respondents.

A quota sampling (non-probability sampling) was used in this study. In this case, the researcher selected the sample who were customers in low-cost fitness centers. The following were the criteria for target respondents:

1. Participants are voluntary to cooperate in this research.
2. Participants can read, understand, and answer the questions.
3. Participants are customers in low-cost fitness center in Semarang city, Indonesia.

The researcher collected data in low-cost fitness centers in Semarang city, Indonesia by selecting one fitness center in each sub-district. There were several

characteristics of low-cost fitness center, such as the ability to operate an entire fitness center with one person, a gym-only proposition, a limited fitness equipment, prices are set at least 50% lower than the industry average (Arroyo et al., 2020). There were 2 sub-districts in Semarang that did not have a fitness center, such as in Tugu and Mijen sub-districts.

In this case, there was no list of all fitness centers in Semarang or even in Indonesia. Hence, the researcher found the fitness centers using Global Positioning System. Due to the pandemic of Covid-19, the researcher asked the owners of fitness center by emailing and calling them in order to get their permission to collect data in their fitness. Next, the researcher explained the purpose and benefit of research in detail and also informed them that the official letter to collect data would be given once the researcher arrived in Semarang, Indonesia. Furthermore, the researcher has chosen fitness centers that have similarities in facilities. There were 14 low-cos fitness centers in Semarang, Indonesia that used to collect data.

3.2. Research Design

In this study, the researcher used survey questionnaire as a tool to examine the effects of service quality on customer satisfaction. The following were the research design's step:

a) Documentary research, secondary data collection from resources e.g., books, journals or relevant studies regarding the research topic.

b) Created the questionnaires regarding the expectations and perception of service quality and customers satisfaction.

c) Brought the create questionnaires to discuss with the advisor to obtain suggestion in order to develop the potential questionnaires.

d) Took the revised questionnaires to propose to 5 experts who have Ph. D in Sport or Recreation Management in order to quality the content validity. The items were assessed by the index of Item-Objective of Congruence (IOC) by the experts. It is developed by Rovinelli & Hambleton (1976). The IOC points were assigned to three grading scales for consistency and congruencies of items. All experts had to choose only one answer as the value given from these three alternative choices. The following are the choices:

-1 = Disagree or do not understand or not congruent to this study,

 0 = Either agree or disagree whether the item is related to this study,

+1= Agree with clear understanding.

The IOC score of more than 0.5 considered to have a good item of validity (Hair et al., 2014). The results were calculated using the following formula:

$$IOC = \frac{\Sigma R}{N}$$

IOC = Item-Objective Congruence Index

R   = Point given by specialists

Σ R   = Total points of each specialist

N   = Total number of experts

e)   After revising the questionnaires, proposed the draft of final questionnaires to the advisor to get the approval. Thereafter, bring the final questionnaires to try out with the samples who were similar to the research's sample with the number of 30 people in order to find out the reliability of the questionnaires by seeking for Cronbach's alpha coefficient. The researcher tried out the questionnaires to customers of fitness center in Semarang, Indonesia. The following are the criteria of Cronbach's scale:

Average	Meaning
0.01 – 0.40	Low level
0.41 – 0.70	Medium level
0.71 – 0.90	High level
0.91 – 1.00	Very high level

 In this case, the researcher determined the reliability of the questionnaire not lower than 0.60.

3.3. Research Instrument

In this study, a closed-ended questionnaire was used for taking the data from respondents. The questionnaires consisted of 3 parts:

1. Demographic profile of respondents
2. Opinions toward service quality (expectation and perception) in fitness center (rating scale)
3. Opinions toward customer satisfaction (rating scale)

1)   Demographic Profile: The researcher checked and chose the demographic of respondents to know about the information such as personal class, age, sex, occupation, and purpose of visiting fitness center. The demographic data questionnaire was adopted and developed from Kotler, (1999), Schiffman and Kanuk, (2007), McCool-Kennedy & Kiel, (2000), Celik, (2015), Senakham, (2008).

2)   Another section was to measure expectations and perception of service quality. This part was to gather the expectation before receiving the services and to gather the perception after receiving the services from fitness center. In this case, to measure it, the researcher used the modified scale from Maksimović et al. (2017). Their instrument was based on work of the SERVQUAL scale originally developed by Parasuraman et al. (1988). It has high validity and reliability measurement (Parasuraman et al., 1988). Moreover, SERVQUAL scale has been applied in many studies in the worldwide to measure the level of service quality in various companies such as in hospital, bank, retail businesses, airport, and others. There are many researchers e.g. Maksimović et al. (2017), Šíma and Ruda (2019), Zardo et al. (2018) etc. that have been applied SERVQUAL to measure service quality in fitness center as well. In addition, in spite of the fact that SERVQUAL was the most widely scale to measure service quality in the world, it also could be applied in various companies because this scale is the most flexible to measure service quality (Meesala & Paul, 2018). In order to suit the fitness center context, the tangible dimension of SERVQUAL was modifying with SQAS originally proposed by Lam et al. (2005). In the tangible dimension was added questionnaires such as workout facilities, locker rooms, and physical facilities from SQAS. Overall, the questions have been modified in order to suit the fitness center context, for example "they should have up-to-date equipment" change into "fitness center will have modern looking equipment", "Their physical facilities should be visually appealing" change into "The physical facilities at fitness center will be visually appealing". The 29-item of expectation and perception of service quality questionnaires were examined by five-point Likert scale. The 5-point rating scale was ranging from: 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), to 5 (strongly agree).

3)   The third section was to measure customer's satisfaction. There were contained 6 questions of customer satisfaction. The researcher used the modified scale

from Moreira and Silva (2016) to measure customer satisfaction. Their instrument is based on work by Oliver, (1997). Beside its popularity to measure customer satisfaction in various companies, there were many researchers around the world e.g. Avourdiadou and Theodorakis (2014), Dias et al. (2019), Moreira and Silva (2016) who have measured customer sat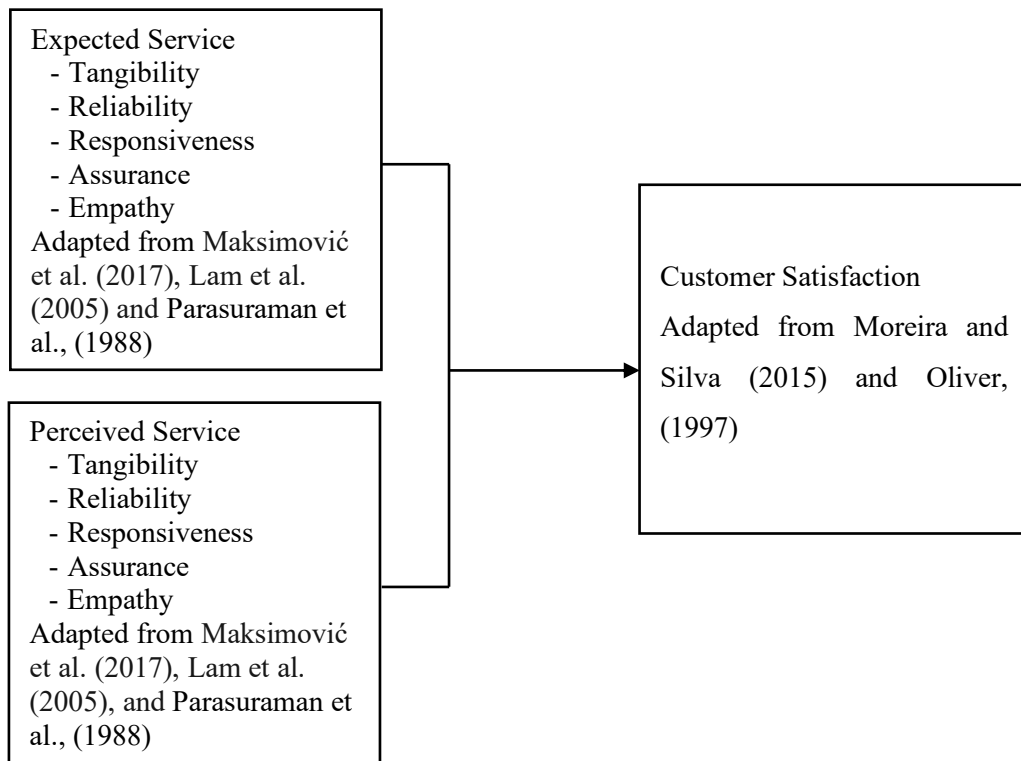isfaction in fitness center proposed by Oliver scale. The questions have been modified in order to suit the fitness center context. The scale ranges from 1 (strongly disagree) to 5 (strongly agree). The following were the criteria of rating scale that used in this study:

Average	Meaning
1.00 – 1.49	Strongly Disagree
1.50 – 2.49	Disagree
2.50 – 3.49	Neutral
3.50 – 4.49	Agree
4.50 – 5.00	Strongly Agree

3.4. Data Collection

In this case, the researcher collected the data in fitness center each sub-district of Semarang city. This research was conducted from August – September 2021 (42 days). The questionnaires were distributed to everyone who has experience in low-cost fitness center by voluntary participants. Due to the Covid-19 pandemic, restrictions on community activities in Semarang were officially extended until 2nd August 2021 (Rosa, 2021). Thus, the researcher distributed the questionnaire by following the rules and policies from government of Semarang. In addition, before distributing the questionnaires, the researcher asked each respondent whether they are willing to participate in the research or not. If the participants agree, the researcher will distribute a participant information sheet and a consent form to participants. They can cancel their participation if they do not agree with the participant information sheet and consent form provided by researcher. The researcher distributed the questionnaire after they read and agreed with the participant information sheet and consent form. Furthermore, the researcher did not force respondents to participate in this research. In this case, the researcher collected a total of 420 voluntarily respondents. Hence, the researcher

collected the data 30 respondents in each fitness center. In addition, based on the law No. 26/2006 on population administration of the Republic of Indonesia, the Indonesian have a freedom to make any decision when they are 17 years old. In this case, the researcher collected data from respondents who were over 17 years old.

The questionnaires were developed in English, it was translated into Bahasa Indonesia using back translation method. The questionnaires were translated to two different translators, the first translator was in charge of translating from English to Indonesian, the second translator was translating back from Indonesian to English. After that, the researcher compared between the original questionnaire and the translation from second translator. The questionnaire was translated into Bahasa Indonesia by sending it to an English-to-Indonesian agency that has been certified by the Association of Indonesian Translator. The Association of Indonesian Translator is located at Pondok Pinang Raya rd, Pondok Pinang, Komayoran Lama Sub-district, South of Jakarta District, Jakarta Province, Indonesia, 12310. The questionnaires will be translated at Anindytrans which is an agency of a sworn translation service. It has been certified by the Association of Indonesian Translator. In addition, it is located at Edi 2 Rd, No.22 Guntur Setiabudi, South of Jakarta, Jakarta Province, Indonesia, 12890. The next step was translating back from Indonesian into English by sending it to an Indonesian-to-English agency that has been certified by the association of Indonesian translator. The name of agency is PT. Indo Lingua Translocalize which is a sworn translation service. It has been certified by the Association of Indonesian Translator. It is located in Lumbungsari Raya Rd. no.14, Kalicari, Pedurungan, Semarang 50198, Jawa Tengah Province, Indonesia. The researcher compared the original questionnaire and the translation from the second translator as the final step.

3.5. Data Analysis

IBM SPSS 22.0 version (Statistical Product and Service Solutions) was used in this study in order to perform the statistical analysis. Statistical significance level was set at 0.05.

Descriptive statistics in part 1: The demographics profile of respondents such as age, gender, and occupation were calculated to analyse the data such as percentages, means, and standard deviations.

Inferential statistic in part 2: Regression analysis was applied to test the effects of service quality on customer satisfaction. Independent variable was service quality and dependent variable was customer's satisfaction. Service quality was quantified:

Service Quality = Expectation – Perception

While customer's satisfaction is quantified:

Customer's Satisfaction = $\beta_0 + \beta_1$ (Service Quality)

3.6 Validity and Reliability

Validity: In this research, content validity of the questionnaire was proved by getting advice from 5 experts to give comments and scores on each questionnaire. The overall validity score is 0.842, thus the questionnaire was found that has a good validity score.

Reliability: In this case, the researcher used Cronbach alpha in order to measure the reliability of questionnaire. The researcher was doing pilot test with 30 customers of fitness center in Semarang, Indonesia. The Cronbach alpha was found at 0.818. That was exceeded what the researcher has set which is 0,70. Thus the research tool was proved to be reliable.

CHAPTER 4
RESEARCH RESULTS

In this chapter, the study of the effects of service quality on customer satisfaction in fitness center in Semarang, Indonesia will be discussed. This research used the questionnaires as a tool to collect data with a sample group of 420 customers. Data analysis for this empirical testing will be described including:

1. Demographic data

2. Descriptive results between independent and dependent variables

3. Hypothesis testing

4.1 Demographic data

Table 2 Personal Class

Personal class	Frequency	Percent
0	240	57.1
1 time	79	18.8
2 times	31	7.4
3 times	18	4.3
More than 3 times	52	12.4
Total	420	100.0

The findings showed that the majority 57.1% of respondents had not taken personal class. The highest proportion of participants having personal class was about 18.8% at 1-time personal class. The level of respondents who took personal class more than 3 times stood approximately at 12.4% and a total of 7.4% of participants took 2 times personal class, while 4.3% respondents was the lowest percentage who took personal class 3 times.

Table 3 Respondents' Age

Respondents' age	Frequency	Percent
Below 19 years old	12	2.9
19-29 years old	176	41.9
30-39 years old	125	29.8
40-49 years old	87	20.7
50-60 years old	17	4.0
Above 60 years old	3	.7
Total	420	100.0

As shown in table 3, the proportion of 41.9% was the majority of respondents aged between 19 and 29 years. A total percentage of 29.8% were between 30 and 39 years old, 20.7% between 40 and 49 years old, 4% between 50 and 60 years old, 2.9% below 19 years old, and the remaining 0.7% above 60 years old.

Table 4 Respondents' Gender

Respondents' gender	Frequency	Percent
Female	114	27.1
Male	306	72.9
Total	420	100.0

It was noticeable that the very large majority were men who accounted for 72.9%. The rest, only 27.1% of respondents were female.

Table 5 Respondents' Educational Level

Respondents' educational level	Frequency	Percent
Senior High School and below	120	28.57
Bachelor's Degree	278	66.19
Master's Degree	20	4.76
Doctoral Degree and above	2	.48
Total	420	100.0

Based on table 5, most of the respondents were graduated from a bachelor's degree with 66.19%. There were 28.57% respondents who were graduated from Senior High School and below, 4.76% were graduated from master's degree, and 0.48% were graduated from Doctoral Degree.

Table 6 Respondents' Income

Respondents' income	Frequency	Percent
Less than 3,000,000	154	36.7
3,000,000 - 5,000,000	162	38.6
5,000,000 - 10,000,000	87	20.7
More than 10,000,000	17	4.0
Total	420	100.0

It was noticeable that the majority of respondents had average income between 3,000,000 and 5,000,000 by 38,6%. A total of 36.7% of respondents had income less than 3,000,000. 20.7% of respondents had income between 5,000,000 and 10,000,000 while the rest, 4% of respondents had income more than 10,000,000.

Table 7 Respondents' Marital Status

Respondents' marital status	Frequency	Percent
Single	175	41.7
Married	228	54.3
Widowed/widower	9	2.1
Divorced	8	1.9
Total	420	100.0

Based on the respondents' marital status, over half of respondents were married with a percentage proportion of 54.3%. It also noticeable that 41.7% of respondents were single. Moreover, widowed/widower had a total percentage of 2.1%, while divorced had a total percentage of 1.9% which indicated the lowest.

Table 8 Respondents' Occupation

Respondents' occupation	Frequency	Percent
Student	73	17.4
Government Employee	56	13.3
Entrepreneur	89	21.2
Private Company Employee	175	41.7
Other	27	6.4
Total	420	100.0

Table 8 indicated that the majority of participants were employees of private company with a percentage proportion of 41.7%, followed by entrepreneur (21.2%), students (17.4%), government employees (13.3%). The customers of fitness center also indicated that some of them had other occupations with 6.4%.

Table 9 Respondents' Visit to fitness Center

Visit	Frequency	Percent
Less than once a week	56	13.3
Once a week	95	22.6
Twice a week	90	21.4
Three times a week	81	19.3
More than 3 times a week	98	23.3
Total	420	100.0

Based on table 9, most of the respondents visited fitness center more than 3 times a week with 23.3%. There were 22.6% respondents who visited once a week, 21.4% respondents visited twice a week, 19.3% visited 3 times a week, and the last 13.3% visited less than a week.

Table 10 Respondents' Purpose

Purpose	Frequency	Percent
Lose weight	122	29.0
Train for bodybuilding/weight training	165	39.4
Relieve stress	61	14.5
Socialize with friends	40	9.5
Other	32	7.6
Total	420	100.0

As shown in table 10, 39.4% of train for body building/weight training were the majority of respondents' purpose. There was a total of 29% had a purpose to lose weight, followed by relieve stress (14.5%), socialize with friends (9.5%), and other (7.6%).

Table 11 Respondents' Membership

Membership	Frequency	Percent
Less than 6 months	59	14.0
6-12 months	68	16.2
1-2 years	100	23.8
3-5 years	62	14.8
More than 5 years	37	8.8
not a member	94	22.4
Total	420	100.0

Based on the table 11, most participants were a member of fitness center between 1 and 2 years with a percentage proportion of 23.8%, followed 6 – 12 months (16.2%), 3 - 5 years (14.8%), less than 6 months (14%), and more than 5 years (8.8%). On the other hand, a total of 22.4% respondents were not a member in the fitness center.

4.2 Descriptive results between independent and dependent variables

Table 12 Expected and Perceived Service Quality

Variable	Expectation		Perception	
	Mean	SD	Mean	SD
Tangible	3.9312	0.4708	3.8054	0.47137
Reliability	3.8195	0.4912	3.8571	0.53904
Responsiveness	3.8825	0.5116	3.8982	0.54733
Assurance	3.9851	0.5398	4.0893	0.54571
Empathy	3.7338	0.5377	3.7916	0.50422
Total	3.8704	0.5102	3.8883	0.52153

The descriptive results of each expected and perceived service quality dimension were shown in table 12. The overall of expected service quality result was perceived as "agree" (mean = 3.8704). It was clear that assurance dimension was the highest expected service quality in the fitness centers (mean = 3.9851). Tangible

dimension (mean = 3.9312) was the second rank in the expected service quality, followed by responsiveness dimension (mean = 3.8825), reliability dimension (mean = 3.8195), and empathy dimension (mean = 3.7338), respectively.

Moreover, the overall of perceived service quality was also perceived as "agree" (mean = 3.8883). Furthermore, the highest perceived service quality was on the assurance dimension with a mean = 4.0893. Responsiveness dimension was the second rank in the fitness centers (mean = 3.8982), followed by reliability dimension (mean = 3.8571), tangible dimension (mean = 3.8054), and the last, empathy dimension (mean = 3.7916), respectively. In this case, it was noticeable that the average of overall perceived service quality was higher than expected service quality (3.8883 – 3.8704 = 0.0179).

Table 13 Service Quality

Variable	Service Quality	Std Dev	Minimum	Maximum	S.E. Mean	t	Sig. (2-tailed)
Tangible	-0.1262	0.51	-2.22	1.78	0.02	-5.12	0.000
Reliability	0.0376	0.47	-2	1.8	0.02	1.63	0.104
Responsiveness	0.0157	0.53	-3	1.83	0.03	0.60	0.547
Assurance	0.1042	0.52	-2	2.25	0.03	4.09	0.000
Empathy	0.0578	0.49	-2.67	2.07	0.02	2.44	0.015

Based on table 13, there were four dimensions that had positive gaps between perception and expectation of service quality, called reliability, responsiveness, assurance, and empathy. In details, assurance was the most dimension that met customer expectations with positive gaps, followed by empathy, reliability, and responsiveness while tangible dimension was the only variable that did not meet customer expectation. On the other hand, the p-value of reliability dimension (0.104) and responsiveness dimension (0.547) was greater than 0.05, so we conclude that the mean difference is not statistically significantly different from 0. Even though reliability and responsiveness dimension had positive gaps, but they were not different from 0.

Table 14 Customer Satisfaction

Variable	Minimum	Maximum	Mean	`SD
1. Specific Services Provided (S1)	2	5	4.0071	0.6003
2. Right Decision (S2)	2	5	3.9833	0.6497
3. Revisit Intention (S3)	2	5	4.2167	0.7168
4. Overall Equipment (S4)	2	5	3.7976	0.7533
5. Personal Class (S5)	2	5	3.7357	0.7040
6. Overall Services (S6)	2	5	4.0214	0.6347
Overall Satisfaction (OS)	2.67	5.00	3.9603	0.5395

Based on the findings, the minimum and maximum of overall satisfaction were 2.67 and 5.00 respectively, while the mean of overall satisfaction in fitness centers, in Semarang was 3.9603. In details, revisit intention variable was the first rank with a total average of 4.2167. Then, overall services variable with having mean 4.0214 was the second rank, followed by specific services (4.0071), right decision (3.9833), overall equipment (3.7976), and personal class (3.7357).

4.3 Hypothesis Testing

Level of Service Quality

As shown in table 13, the results showed that the gaps between perceived and expected service quality were presented. The average level of service quality (expectation and perception) in the fitness center was positively different which indicated to satisfy the hypothesis 1.

In this case, tangible dimension had negative results which illustrated that did not meet customer expectation. Hence, the fitness center in Semarang, Indonesia should consider improving the tangible dimension.

Regression Analyses

Table 15 Significance of Independent Variable

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	20.623	8	2.578	10.458	.000
Residual	101.308	411	.246		
Total	121.932	419			

Note: R = 0.411, R^2 = 0.169, Adjusted R^2 = 0.153, Std. error of the estimate = 0.49648
Dependent variable: Customer satisfaction

The data were set at 0.05 of significance level. Based on table 15, p-value of ANOVA test was less than the 0.05 alpha level which indicated that at least 1 independent variable could explain the dependent variable. Moreover, the R-square value was 0.169, which showed that all independent variables (tangible, reliability, responsiveness, assurance, empathy, personal class, membership, interaction between personal class and membership) could describe overall satisfaction by 16.9%. Thus, hypothesis two was satisfied.

Table 16 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.816	.064		59.647	.000
Tangible	.263	.067	.246	3.935	.000
Reliability	-.020	.074	-.018	-.273	.785
Responsiveness	-.061	.075	-.061	-.821	.412
Assurance	-.037	.064	-.036	-.583	.560
Empathy	.273	.069	.246	3.933	.000
Personal Class	.289	.116	.265	2.493	.013
Membership	.159	.073	.123	2.167	.031
PC * M	-.220	.128	-.196	-1.715	.087

Note: Dependent variable: Customer satisfaction

Based on table 16, the variables that had significant effect on overall satisfaction were tangible dimension, empathy dimension personal class, and membership while other variables were not significant. The detailed explanation is as follows:

Tangible dimension had a positive effect on customer satisfaction at the significance level of 0.05. Moreover, the tangible dimension had a positive β value at 0.263 which indicated that if tangible increases 1 unit, the overall satisfaction will increase to 0.263 unit. This means that the higher level of tangible will provide higher level of customer satisfaction in fitness center in Semarang, Indonesia.

The results showed that empathy dimension had a p-value of less than 0.05 which indicated statistically significant. Furthermore, empathy dimension had a positive β value at 0.273 which indicated that the overall satisfaction would increase to 0.273 unit if we increase empathy 1 unit. This means that the higher level of empathy will contribute higher level of customer satisfaction in fitness center in Semarang, Indonesia.

The findings revealed that personal class had a positive effect on customer satisfaction at significance level of 0.05. In addition, personal class had a positive β value at 0.289 which showed that if tangible increases 1 unit, the overall satisfaction will increase to 0.289 unit. The findings indicated that the customers who took personal classes were more satisfied than the customer who did not take personal classes. This means that the higher level of personal class will provide higher level of customer satisfaction in fitness center in Semarang, Indonesia.

The results showed that membership had a positive impact on customer satisfaction at significance level of 0.05. Moreover, membership had a positive β value at 0.159 which indicated that the overall satisfaction would increase 0.159 unit if we increase membership 1 unit. The findings also indicated customers who were members in low-cost fitness centers were happier than customer who were not members. This means that the higher level of membership will contribute higher level of customer satisfaction in fitness center, in Semarang, Indonesia.

Table 17 Regression Analysis of Specific services provided (S1)

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.954	.072		55.243	.000
Tangible	.220	.075	.185	2.947	.003
Reliability	.033	.083	.026	.400	.689
Responsiveness	-.169	.084	-.150	-2.025	.044
Assurance	-.027	.071	-.023	-.375	.708
Empathy	.438	.078	.355	5.644	.000
Personal Class	.196	.130	.162	1.513	.131
Membership	.029	.082	.020	.357	.721
PC * M	-.129	.143	-.104	-.901	.368

Dependent variable: S1

As seen on table 17, three independent variables were statistically significant on specific services provided, namely tangible and empathy, and responsiveness. Tangible and empathy dimension had a positive impact on specific services provided (S1) (β = .220, and β = .438, Sig. < .05). These indicated that tangible and empathy positively influence S1 in fitness centers, in Semarang, Indonesia. This means that if we give higher level of tangible and empathy, they will give higher level of customer satisfaction on specific services provided (S1). In contrast, responsiveness had a negative impact on customer satisfaction (β = -.169, Sig. < .05). It indicated that responsiveness negatively influences on S1. Therefore, the higher level of responsiveness will contribute lower customer satisfaction especially on specific services provided (S1) in fitness center.

Table 18 Regression Analysis of Right Decision (S2)

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.683	.078		47.204	.000
Tangible	.157	.081	.122	1.926	.055
Reliability	-.008	.091	-.006	-.085	.933
Responsiveness	-.026	.091	-.021	-.287	.774
Assurance	.031	.078	.025	.399	.690
Empathy	.278	.085	.207	3.277	.001
Personal Class	.359	.141	.274	2.538	.012
Membership	.325	.090	.209	3.623	.000
PC * M	-.287	.156	-.213	-1.838	.067

Dependent variable: S2

Based on the findings, there were three factors called empathy (β = .278), personal class (β = .359), and membership (β = .325) that have a positive impact on the right decision (S2) (Sig. < .05). This revealed that empathy, personal class, and membership positively influence the right decision (S2) in fitness centers, in Semarang, Indonesia. The members were more satisfied than non-members towards the right decision (S2). Moreover, people who took personal class have more satisfaction toward right decision (S2) than people who have no experience in personal class. Therefore, the higher level of empathy, personal class, and membership will contribute to higher level of customer satisfaction on the right decision (S2).

Table 19 Regression Analysis of Revisit Intention

variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.862	.087		44.384	.000
Tangible	.212	.091	.150	2.338	.020
Reliability	-.141	.101	-.093	-1.391	.165
Responsiveness	.059	.102	.044	.577	.564
Assurance	.005	.087	.004	.063	.950
Empathy	.173	.094	.117	1.826	.069
Personal Class	.269	.158	.186	1.703	.089
Membership	.462	.100	.269	4.626	.000
PC * M	-.271	.174	-.182	-1.553	.121

Dependent variable: S3

The results showed that tangible (β = .212) and membership (β = .462) have a positive impact on revisit intention (S3) (Sig. < .05). These confirmed that tangible and membership positively influence customer satisfaction on revisit intention (S3). The members were more satisfied than non-members towards revisit intention. Thus, the higher level of tangible and membership will contribute to higher level of customer satisfaction on revisit intention.

Table 20 Analysis Regression of Overall Equipment (S4)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.702	.090		41.279	.000
Tangible	.581	.094	.389	6.204	.000
Reliability	-.033	.104	-.021	-.321	.748
Responsiveness	-.191	.105	-.135	-1.820	.070
Assurance	-.123	.089	-.085	-1.379	.169
Empathy	.235	.097	.152	2.417	.016
Personal Class	.433	.163	.285	2.666	.008
Membership	.136	.103	.076	1.324	.186
PC * M	-.328	.180	-.210	-1.824	.069

Dependent variable: S4

As seen on table 20, there were three independent variables namely tangible (β = .581), empathy (β = .235) and personal class (β = .433) have a positive impact on overall equipment (S4) (Sig. < .05). These confirmed that three of them positively influence customer satisfaction on overall equipment (S4). People who took personal class have more satisfaction toward overall equipment than people who have no experience in personal class. This means that if we give higher level of tangible, empathy and personal class will provide higher level of customer satisfaction on overall equipment.

Table 21 Regression Analysis of Satisfaction of Personal Class (S5)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.723	.087		42.801	.000
Tangible	.260	.091	.187	2.868	.004
Reliability	.154	.101	.104	1.528	.127
Responsiveness	-.053	.102	-.040	-.520	.604
Assurance	-.094	.087	-.069	-1.081	.280
Empathy	.186	.094	.128	1.968	.050
Personal Class	.331	.158	.233	2.099	.036
Membership	-.064	.100	-.038	-.645	.519
PC * M	-.143	.174	-.098	-.820	.413

Dependent variable: S5

The findings showed that tangible (β = .260) and personal class (β = .331) have a positive impact on personal class provided by fitness centers (Sig. < .05). These confirmed that tangible positively influence personal class (S5). Furthermore, people who took personal class have more satisfaction towards personal class (S5) provided by fitness center than people who did not take personal class. This means that the higher level of tangible and personal class will contribute to higher level of customer satisfaction on personal class (S5).

Table 22 Regression Analysis of Overall services (S6)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.970	.079		50.269	.000
Tangible	.146	.082	.116	1.774	.077
Reliability	-.129	.092	-.096	-1.403	.161
Responsiveness	.015	.092	.013	.167	.867
Assurance	-.019	.079	-.016	-.248	.804
Empathy	.331	.086	.253	3.857	.000
Personal Class	.152	.143	.118	1.060	.290
Membership	.068	.091	.044	.744	.457
PC * M	-.165	.158	-.125	-1.041	.298

Dependent variable: S6

Based on table 22, there was an independent variable namely empathy has a positive impact on overall services (β = .331, Sig. < .05). It indicated that empathy positively influences overall services (S6) in fitness centers in Semarang, Indonesia. This means that the higher level of empathy will provide higher level of customer satisfaction on overall services, while lower level of empathy will provide lower level of customer satisfaction on overall services.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Discussion and Conclusion

Service quality is indicated as a key for fitness centers to have a competitive advantage. In this study, the researcher evaluated the level of service quality and its effects on customer satisfaction. A total of 420 respondents were celected using quota sampling from 14 low-cost fitness centers in Semarang, Indonesia.

The findings showed that most of customers in low-cost fitness center in Semarang, Indonesia had not taken personal class. Based on respondents gender, the majority of respondents were male and they were aged between 19-29 years. Mostly,they were graduated from bachelor degree; had average income between 3,000,000 – 5,000,000; were married; worked at private company. Moreover, the respondents's purpose of visiting the fitness center was for bodybuilding training / weight training and visiting the fitness center more than once a week. We also found that the customers of fitness center were members.

In this study the researcher examined the expected service and perceived service in order to find the service quality in low cost fitness centers in Semarang, Indonesia. The findings from descriptive analysis showed that the overall of expceted service quality result was perceived as "agree". The results also indicated as "agree" on the overall of perceived service quality. Even though both of overall expected and perceived indicated as agree, each dimension in expected and perceived service quality had different scores. In this study, we examined In detailed findings, tangible was the only dimension that had negative gaps (-0.1262) which indicated tangible dimension did not surpass customer expectations. In line with the research of Zardo et al. (2018) and Maksimović et al. (2017), that tangible dimension had a negative score. Based on these findings, we could understand that customers involved in this study had higher expectations towards tangible dimension. Moreover, we could understand that the low-cost fitness center could not fulfill the customers expectation especially in the tangible dimension. On the other hand, other dimensions such as reliability, responsiveness, assurance, and empathy were surpassed customer expectations. Assurance dimension found the highest positive gaps between perceptions and expectation of service quality

at 0.1042, followed by empathy dimension at 0.0578, reliability dimension at 0.0376, and responsiveness dimension at 0.0157. It is crucial to identify gaps between perceived service quality and expected service quality and focus on possible improvement based on the gaps.

In the present study, we also found that there was a positive relationship between service quality and customer satisfaction. This finding was in line with other researchers that service quality has a poitive effect on customer satisfaction (Dias et al., 2019; Maksimović et al., 2017; Moreira & Silva, 2016; Tsitskari et al., 2014). Based on findings, all independent could collectively explain overall satisfaction in low-cost fitness centers in Semarang with the variance explained of 16.9%. We could see that service quality had a low effect on customer satisfaction in low-cost fitness center in Semarang, Indonesia. As we know, Semarang city is on of the biggest cities in Indonesia. Therefore, the further research is needed to examine the effect of service quality on customer satisfaction in other big cities in order to know how well the service quality affects customer satisfaction.

Particularly, the researcher has ascertained which items of independent variables contritube more significantly to customer satisfaction. The findings showed that tangible dimension, empathy dimension, membership, and personal class have a positive effect on overall satisfaction. Four of these variables indicated that played big roles driving customer satisfaction in fitness centers in Semarang, Indonesia. The higher level of tangible dimension, empathy dimension, personal class, and membership will contribute to higher level of customer satisfaction, while the lower level of them will contribute to lower customer satisfaction. We could see that tangible dimension had a negative score of service and it affected customer satisfaction. Tangible dimension which refers to fitness center facilities is a key finding in this study. This finding was in line with Moreira and Silva (2016) & Maksimović et al. (2017) that facilities have a great effect on customer satisfaction.

Moreover, the researcher found the independent variables that had a relationship with satisfaction 1 to satisfaction 6.

Based on satisfaction 1, the researcher revealed that tangible and empathy positively influenced specific services provided (S1). This means that the higher level of tangible and empathy will provide a higher level of specific services provided (S1).

On the other hand, we found that responsiveness negatively influenced specific services provided (S1). This means that the higher level of tangible will contribute to lower level of specific services provided (S1). In this case, the reserarcher suggested that the managers should emphasize increasing tangible and empathy in fitness center in Semarang, Indonesia. The researcher also suggested that the managers consider responsiveness dimension because it has a negative effect on specific services provided. Hence, the managers should improve the public relations training of staff.

Based on satisfaction 2, the researcher indicated that empathy, personal class, and membership positively influenced the right decision (S2). The members were more satisfied towards the right decision (S2) than non-members. In addition, the customers who took personal class were more satisfied towards the right decision (S2) than people who have no experience in personal class. Therefore, the higher level of empathy, personal class, and membership will contribute to higher level of customer satisfaction on the right decision (S2). The managers of fitness center should emphasize improving empathy, personal class, and membership because they a have positive effect on the right decision (S2)

The researcher found that tangible and membership positively influenced revisit intention (S3). The members were more satisfied than non-members towards revisit intention (S3). Therefore, the higher level of tangible and membership will contribute to higher level of revisit intention. The managers of fitness center should emphasize improving tangible and membership.

Based on satisfaction 4, the researcher found that tangible, empathy, and personal class positively influenced overall equipment (S4). People who took personal classes have more satisfaction towards overall equipment than people who have no experience in personal classes. Thus, the higher level of tangible, empathy, and personal class will contribute to higher level of overall equipment. The managers of fitness center should emphasize improving tangible, empathy, and personal class.

The researcher found that tangible and personal class positively influenced personal class (S5). People who took personal classes have more satisfaction toward personal class (S5) provided by fitness centers than people who did not have experience in personal classes. The higher level of tangible and personal class will contribute to higher level of personal class (S5). The managers of fitness center should emphasize

improving tangible and personal class because they have a positive effect with personal class.

Based on satisfaction 6, we found that empathy positively influenced overall services (S6). This means that the higher level of empathy will contribute to higher level of overall services. The managers of fitness center should emphasize improving empathy because it has a positive effect with overall services.

In conclusion, the researcher found that tangible dimension did not surpass customer expectation while others exceeded customer expectations. It is essential to identify the gaps between expected service and perceived service. Thus we could make an improvement on the dimension which has negative scores. In order to meet customer expectations, the managers of low-cost fitness centers should more take care of tangible dimension such as the physical facilities, workout facility, appearance of staff and equipment, and also the cleanliness.

Based on further findings, tangible, empathy, personal class, and membership have positively affected overall satisfaction. Thus, the managers of fitness center should emphasize improving four of these variables. In order to increase the overall satisfaction, managers of low-cost fitness center should pay attention to the some points of tangible dimension such as appearance of equipment, the direction of using the equipment, the lighting and temperature of room, appearance of staff, parking lot and the cleanliness of the room and rest room. Moreover, manager also should pay attention to empathy dimension, such as understanding the customers' specific needs, giving the individual care and attention to each customers and also giving personal service to them. Based on the personal class and membership, what the managers should do is convince the customers to join the classes and approach them to be a member, because once the customers satisfied with the classes provided by fitness and membership. Moreover, the managers of fitness center also should emphasize improving the variables that have a positive effect on specific services provided (S1), right decision (S2), revisit intention (S3), overall equipment (S4), personal class (S5), and overall services (S6).

5.2 Suggestion for Future Research

This research was to study the effects of service quality on customer satisfaction in fitness center sector in Semarang, Indonesia. The findings may be not applicable to other sectors. Based on the study, it has several limitations that can be explored further. The research was limited to Semarang city which can be compared to other big cities in Indonesia such as Surabaya, Bandung, Yogyakarta, and others. Moreover, the study was conducted by quantitative approach. Therefore, the future study may use qualitative approach or even use both of quantitative and qualitative.

REFERENCES

References

Afthinos, Y., Theodorakis, N. D., & Nassis, P. (2005). Customers' expectations of service in Greek fitness centers. *Journal of Managing Service Quality*, *15*(3), 245-258.

Ali, M. A., Rahayu, S., Rahayu, T., & Choosakul, C. (2019, 10-12 September). Exercise Behaviour Analysis of Universitas Negeri Semarang Sports Sciences Students. 5th International Conference on Physical Education, Sport, and Health (ACPES 19), Semarang, Indonesia.

Aprianto, B., & Sugiharto, S. (2020). The Differences in Effectiveness of Set System and Compound Set Methods On the Arm Muscle Hypertrophy Program of Pion Fitness Semarang's Members [Perbedaan Efektivitas Metode Set Sistem dan Compound Set Terhadap Program Hypertrophy Otot Lengan Member Fitness Pion Gym Semarang]. *Journal of Sport Science and Fitness*, *6*(1), 6-12.

Arroyo, M. J. B., Fernández, J. G., Ruiz, P. G., & Puyana, M. G. (2020). Analyzing Consumer Loyalty through Service Experience and Service Convenience: Differences between Instructor Fitness Classes and Virtual Fitness Classes. *Journal of Sustainability*, *12*(3), 828 - 844.

Avourdiadou, S., & Theodorakis, N. D. (2014). The development of loyalty among novice and experienced customers of sport and fitness centres. *Journal of sport Management*, *17*(4), 419-431.

Beytell, C. C. (2010). *Customer expectations and satisfaction with fitness facilities in the North–West Province* [Thesis, North-West University].

Brady, M. K., & Cronin, J. J. (2001). Some new thoughts on conceptualizing perceived service quality: a hierarchical approach. *Journal of marketing*, *65*(3), 34-49.

Cochran, W. G. (1977). *Sampling Techniques* (3rd ed.). John Wiley & Sons. (United States of America)

Department of Population and Civil Registration Semarang City. (2020). *Total Population of Semarang City*. Retrieved 12th January, 2020 from http://www.dispendukcapil.semarangkota.go.id/statistik/jumlah-penduduk-kota-semarang/2019-12-28

Dias, C., Ferreira, A., Romão, P. A., & Fonseca, A. M. (2019). Examining the relationship between perceived service quality, satisfaction, and renewal intention in Portuguese fitness centers. *Journal of Sport Psychology*, *28*(2), 49-58.

Du Plessis, P. J., Rousseau, D., & Boshoff, C. (2007). *Buyer behaviour: understanding consumer psychology and marketing* (4th ed.). Oxford University Press.

Endra, H. (2019, 10th July). Bimo, Extremely Obese Adolescents (250 kg) in Dr. Kariadi Semarang hospital. *TribunJateng*. https://jateng.tribunnews.com/2019/07/10/kisah-remaja-obesitas-dengan-berat-badan-250-kg-di-rsup-dr-kariadi-semarang

Fafurida, F., & Oktavilia, S. (2020). Sustainable Transportation Strategy in Semarang City, Indonesia. *Test Engineering and Management*, *83*, 16868-16872.

Fajlin, E. Y. (2020a, 27th January). Fitness Outdor at Tri Lomba Juang, Semarang Has Been Inaugurated, Residents Can Use It For Free. *TribunJateng*.

https://jateng.tribunnews.com/2020/01/27/fitnes-outdoor-di-gor-tri-lomba-juang-semarang-diresmikanwarga-bisa-pakai-gratis

Fajlin, E. Y. (2020b, 7th June). Semarang City Youth and Sports Agency Reminds Residents Who Exercise in Public Areas to Apply Health Protocols. *Tribunjateng*. https://jateng.tribunnews.com/2020/06/07/dispora-kota-semarang-ingatkan-warga-yang-berolahraga-di-area-publik-terapkan-protokol-kesehatan.

Fernández, J. G., Ruiz, P. G., Colon, L. V., Gutiérrez, J. O., & Gavira, J. F. (2018). Exploring fitness centre consumer loyalty: differences of non-profit and low-cost business models in Spain. *Journal of Economic research*, *31*(1), 1042 - 1058.

Fitnation. (2019). *Member of Fitnation Fitness in Semarang, Indonesia*. Retrieved October 10, 2019 from https://fitnation.co.id/membership/

García-Fernández, J., Gálvez-Ruíz, P., Fernández-Gavira, J., Vélez-Colón, L., Pitts, B., & Bernal-García, A. (2018). The Effects of Service Convenience and Perceived Quality on Perceived value, Satisfaction and Loyalty in Low-Cost Fitness Centers. *Sport Management Review*, *21*(3), 250-262.

Gronroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing*.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. (2014). *Multivariate Data Analysis* (8th ed.). Harlow: Pearson Education Limited.

Hallowell, R., Schlesinger, L. A., & Zornitsky, J. (1996). Internal service quality, customer and job satisfaction: Linkages and implications for management. *Journal of Human Resource Planning*, *19*(2), 20-31.

Haro-González, M. P.-O., Raquel , Grao-Cruces, A. N., Román , & Nuviala, A. (2017). Female users of unisex fitness centres and of fitness centres exclusive for women: satisfaction. *International Journal of Sports Marketing and Sponsorship*, *19*(4), 384-395.

Hoffman, K. D., & Bateson, J. E. (2018). *Services marketing: concepts, strategies, & cases* (5th ed.). Cengage learning.

Howat, G., Absher, J., Crilley, G., & Milne, I. (1996). Measuring customer service quality in sports and leisure centres. *Journal of Managing leisure*, *01*(2), 77-89.

Howat, G., & Assaker, G. (2013). The hierarchical effects of perceived quality on perceived value, satisfaction, and loyalty: Empirical results from public, outdoor aquatic centres in Australia. *Journal of Sport Management Review*, *16*(3), 268-284.

Hsueh, Y. S., & Su, J. M. (2013). The Relationship Among Service Quality and Satisfaction of Customers in Fitness Centers Located in Southern Taiwan. *Life Science Journal*, *10*(4), 2613 - 2618.

IHRSA. (2018a). *The 2018 IHRSA Global Report*. IHRSA. Retrieved 10th December, 2019 from https://www.ihrsa.org/publications/the-2018-ihrsa-global-report/

IHRSA. (2018b). *IHRSA Report: Asia-Pacific Markets Attract 22M Gym Members*. IHRSA. Retrieved 10th December, 2019 from https://www.ihrsa.org/about/media-center/press-releases/ihrsa-reports-asia-pacific-markets-attract-22m-gym-members/

IHRSA. (2019). *The 2019 IHRSA Global Report*. IHRSA. Retrieved 10th December, 2020 from https://www.ihrsa.org/publications/the-2019-ihrsa-global-report/

Jasinskas, E., Reklaitiene, D., & Svagzdiene, B. (2013). Evaluation of service quality in fitness centres. *Journal of Transformation in Business & Economic*, *12*(1), 108-124.

Kampusnesia. (2018). *FitNation Opens a Premier Fitness Center in Semarang City*. STIKOM Semarang. Retrieved 13 January, 2020 from https://kampusnesia.com/2018/08/15/fitnation-buka-primier-fitnes-center-di-kota-semarang/

Kim, D., & Kim, S. Y. (1995). QUESC: An instrument for assessing the service quality of sport centers in Korea. *Journal of sport management*, *9*(2), 208-220.

Kim, K. T., Bae, J., Kim, J. C., & Lee, S. (2016). The Servicescape in the fitness center: measuring fitness center's services. *International Journal of Sport Management, Recreation & Tourism*, *21*(1), 1-20.

Kusumasari, D. W., & Dwiyanto, B. M. (2013). Analysis of the Influence of Motivation, Location, and Service Quality on Decisions on Choosing a Fitness Center as a Place to work out (Case Study at Oryza Gym Fitness Center, Semarang) [Analisis Pengaruh Motivasi, Lokasi, Dan Kualitas Layanan Terhadap Keputusan Pemilihan Fitness Center Sebagai Tempat Melatih Kebugaran Tubuh (Studi Kasus Pada Oryza Gym Fitness Center Semarang)]. *Jurnal Studi Manajemen dan Organisasi*, *11*(2), 104 -115.

Lam, E. T., Zhang, J. J., & Jensen, B. E. (2005). Service Quality Assessment Scale (SQAS): An instrument for evaluating service quality of health-fitness clubs. *Journal of Measurement in Physical Education and Exercise Science*, *9*(2), 79-111.

Lim, J., Romsa, B., & Armentrout, S. (2016). The impact of perceived value, satisfaction, service quality on customer loyalty in women's fitness clubs. *The Sport Journal*, *56*, 139-149.

Maksimović, N., Matić, R., Tovilović, S., Popović, S., Maksimović, B., & Opsenica, S. (2017). Quality of services in fitness centres: importance of physical support and assisting staff. *Journal of Physical Education and Recreation*, *39*(3), 67-78.

Mariza, Y. Y., & Kusumastuti, A. C. (2013). The Relationship Between Breakfast Habits and Snacking Habits with Nutritional Status of Elementary School Children in Pedurungan Sub-District, Semarang City [Hubungan Kebiasaan Makan Pagi dan Kebiasaan Jajan dengan Status Gizi Anak SD di Kelurahan Pedurungan Kota Semarang]. *Journal of Nutrition College*, *02*(1), 207-213.

Meesala, A., & Paul, J. (2018). Service quality, consumer satisfaction and loyalty in hospitals: Thinking for the future. *Journal of Retailing and Consumer Services*, *40*, 261-269.

Moreira, A. C., & Silva, P. M. F. D. (2016). Complaint behaviour by third parties: exploring service quality, customer satisfaction and word-of-mouth in health clubs. *International Journal of Sport Management and Marketing*, *16*(3-6), 152-171.

Najafzadeh, Rahim, M., Shiri, & Fatemeh. (2015). The relationship between service quality and perceived value with customer loyalty and aerobic fitness clubs in

Tabriz. *International Journal of Physical Education, Sports and Health*, *1*(6), 69-73.

Namin, A. (2017). Revisiting customers' perception of service quality in fast food restaurants. *Journal of Retailing and Consumer Services*, *34*, 70-81.

Nanda, A. M., Athanasius, S. S., & Indrajaya, T. (2020). Strategic Planning For Fitness Center Business Development in Semarang [Perencanaan Strategis Untuk Pengembangan Bisnis Fitness Center di Semarang]. *JEMAP*, *2*(2), 196-215.

National Development Planning Agency. (2019). *Management Direction of 10 Metropolitan Areas of Indonesia*. Kementerian PPN / Bappenas. Retrieved 30th June, 2020 from https://www.bappenas.go.id/id/berita-dan-siaran-pers/menteri-bambang-beri-arahan-pengelolaan-10-wilayah-metropolitan-indonesia/

Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, *17*(4), 460-469.

Oliver, R. L. (1997). *Satisfaction: A behavioral perspective on the consumer*. McGraw Hill.

Papadimitriou, D. A., & Karteroliotis, K. (2000). The service quality expectations in private sport and fitness centers: A reexamination of the factor structure. *Journal of Sport Marketing Quarterly*, *9*(3), 157-164.

Parasuraman, Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of marketing*, *49*(4), 41-50.

Parasuraman, Zeithaml, V. A., & Berry, L. L. (1988). Servqual: A multiple-item scale for measuring consumer perc. *Journal of retailing*, *64*(1), 12-40.

Peitzika, E., Chatzi, S., & Kissa, D. (2020). Service Quality Expectations in the Fitness Center Context: A Validation of the Expectations Component of the SERVQUAL Scale in Greece. *Journal of Services Marketing Quarterly*, *41*(2), 89-104.

Polyakova, O., & Mirza, M. (2015). Perceived service quality models: Are they still relevant? *The Marketing Review*, *15*(1), 59-82.

Radar Semarang. (2019, December 9). The Mayor of Semarang City made thousands of Banyumanik residents cheerful. *Jawa Pos*. https://radarsemarang.jawapos.com/event/kampung-hebat/2019/12/09/wali-kota-semarang-bikin-ambyar-ribuan-warga-banyumanik/

Rosa, M. C. (2021, 25th July). Restrictions on Community Activities (PPKM) Level 4 officially extended until August 2, 2021, Here are the Rules and Region. *Kompas.com*. https://www.kompas.com/tren/read/2021/07/25/215500665/ppkm-level-4-resmi-diperpanjang-hingga-2-agustus-2021-ini-aturan-dan?page=all

Rovinelli, R. J., & Hambleton, R. K. (1976). On the use of content specialists in the assessment of criterion-referenced test item validity. *Dutch Journal for Educational Research*, *2*(2), 49-60.

Rust, R. T., & Oliver, R. L. (1994). Service quality: insights and managerial implications from the frontier. *Journal of Marketing Research*, *2*, 1-19.

Sassatelli, R. (2014). *Fitness culture, Gyms and the Commercialisation of Discipline and Fun*. Pagrave.

Semarangkota. (2019). *City Structure Map*. Retrieved January 20 from https://gis.dukcapil.kemendagri.go.id/peta/

Setiawan, A. (2019). *Obesity Case in Semarang*. Berita Satu. Retrieved 30th June, 2020 from https://www.beritasatu.com/galeri-foto/11610-kasus-obesitas-di-semarang

Šíma, J., & Ruda, T. (2019). Using the SERVQUAL Model in Prediction of Customer Satisfaction in Czech Fitness Centres. *Journal of Sports management*, *7*(1), 42-49.

Soygüden, A., Kaya, S., & Hoş, S. (2015). Investigation of intended service quality levels in health-fitness centers in Turkey. *Journal of Physical Education and Sports Science 9*(1), 163-178.

Statista. (2020). *Fitness Indonesia*. Statista, Inc. Retrieved 29th Mei, 2020 from https://www.statista.com/outlook/313/120/fitness/indonesia#market-marketDriver

Teik, D. O. L. (2015). Enhancing the experience of needs satisfaction through service engagement: A case of commercial fitness centers in Malaysia. *Journal of Global Scholar of Marketing Science*, *25*(2), 109-121.

Thenu, S. (2019). *Investment Reaches IDR 47.24 Trillion, Jawa Tengah Creates 71,639 Job Vacancies. beritasatu*. Retrieved 4th March, 2021 from https://www.beritasatu.com/nasional/585540/raup-investasi-rp-4724-triliun-jateng-ciptakan-71639-lapangan-kerja

Toarik, M. (2019). *Fitness Center Business has a 25% Opportunity to Grow by 2020*. BeritaSatu. Retrieved 15th July, 2020 from https://www.beritasatu.com/ekonomi/585892-bisnis-pusat-kebugaran-berpeluang-tumbuh-25-tahun-2020

Tsitskari, E., Antoniadis, C., & Costa, G. (2014). Investigating the relationship among service quality, customer satisfaction and psychological commitment in Cyprian fitness centres. *Journal of Physical Education and Sports Science*, *14*(4), 514-520.

Wei, P. C., Hung, H.-C., Yang, H.-C., Hsu, Y.-J. A., & Ma, Z. (2010). Examination of the influence of service quality on membership renewal in fitness centers in San Francisco Bay Area. *Journal of Service Science 3*(2), 13-24.

Wilson, A., Zeithaml, V., Bitner, M. J., & Gremler, D. (2012). *Services marketing: Integrating customer focus across the firm*. McGraw Hill.

Yarimoglu, E. K. (2014). A review on dimensions of service quality models. *Journal of Marketing Management*, *2*(2), 79-93.

Yildiz, K., Polat, E., & Güzel, P. (2018). A Study Investigating the Perceived Service Quality Levels of Sport Center Members: A Kano Model Perspective. *Journal of Education and Training Studies*, *6*(4), 177-188.

Yunita, N. W. (2017). *Semarang City is the Main Support for Jawa Tengah's Economic Growth*. Detik Finance News. Retrieved 4th March, 2021 from https://finance.detik.com/berita-ekonomi-bisnis/d-3530708/semarang-penyangga-utama-pertumbuhan-ekonomi-jateng

Yusof, A., Jacklyn, 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.

Yusof, A., Popa, A., & Geok, S. K. (2018). Relationship between Perceptions of Fitness Facility Service Quality and Future Intentions of Fitness Center Users in Thailand. *International Journal of Academic Research in Business & Social Sciences*, *8*(7), 863-871.

Zardo, H. T., Biçer, M., & Abakay, U. (2018). Investigation of Quality of Service Mantality in Turkey and Iraq Sport Centers. *European Journal of Physical Education and Sports Science*, *4*(7), 43-49.

Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2006). *Services marketing: integrating customer focus across the firm. Third Edition*. McGraw-Hill.

APPENDIX

Appendix 1

First of all, the researcher would like to appreciate you for taking part in the researcher's project about The Effect of Service Quality on Customer's Satisfaction in the Fitness Center. The researcher will conduct the research carefully about the information of research participants. Any information you provided will be kept confidential. In addition, this research will be used for educational purposes only.

There are 3 sections in this questionnaire, including general information of respondents, expectation and perception of service quality and customer's satisfaction. This research is conducted based on your past experiences about service quality and customer's satisfaction in fitness center before Covid-19 pandemic. Please read and follow the instructions carefully before you answer. Thank you for your cooperation.

SECTION ONE: General Information of Respondents

This section contains statements concerning general information about the participant. Please give checkmark (✓) in the appropriate box that describes your situation.

1. How many times have you taken personal classes?

   ☐ 0   ☐ 1 time   ☐ 2 times

   ☐ 3 times   ☐ More than 3 times

2. Age:

   ☐ Below 19 years old ☐ 19 – 29 years old   ☐ 30 – 39 years old

   ☐ 40 - 49 years old   ☐ 50 – 60 years old ☐ Above 60 years old

3. Sex:

   ☐ Female   ☐ Male

4. Educational Level:

   ☐ Senior High School and below   ☐ Bachelor Degree

   ☐ Master degree   ☐ Doctoral Degree and above

5. What is your monthly income in Rupiah? (1 THB = 440 IDR)

   ☐ Less than 3,000,000   ☐ 3,000,000 – 5,000,000

   ☐ 5,000,000 -10,000,000   ☐ More than 10,000,000

6. Marital Status:

☐ Single   ☐ Married

☐ Widowed / Widower   ☐ Divorced

7. What is your occupation?

☐ Student   ☐ Government employee

☐ Entrepreneur   ☐ Private company employee

☐ Other professions, please specify ……………

8. How often did you visit to fitness center?

☐ Less than once a week   ☐ Once a week

☐ Twice a week   ☐ Three times a week

☐ More than three times a week

9. Purpose of visiting fitness center was to

☐ Lose weight   ☐ Train for bodybuilding/ weight training

☐ Relieve stress   ☐ Socialize with friends

☐ Others, please specify………….

10. How long have you been a member of this fitness center?

☐ Less than 6 months   ☐ 6 – 12 months   ☐ 1 – 2 years

☐ 3 – 5 years   ☐ More than 5 years ☐ Not a member

SECTION TWO: Expectation and Perception of Service Quality

The following set of statements relate to your opinion about expectation and perception of service quality in fitness center. Expectation relates to what you expect from fitness center, while perception relates to your feelings about fitness center you have attended.

Expectation:

Please show the extent to which you expect the fitness center based on the statements below. There is no right or wrong answer. What we are interested here is a number that best shows your expectations about the fitness center. Please give checkmark (✓) the degree that best describes you either agree or disagree with the statement below regarding in the fitness center.

(1) = Strongly disagree, (2) = Disagree, (3) = Neutral, (4) = Agree, (5) = Strongly Agree.

Perception:

Please show the extent to which you believe the fitness center has features described in the statements below. There is no right or wrong answer. What we are interested here is a number that best shows your perceptions about the fitness center which has treated you. Please mark (✓) the degree that the best describes you either agree or disagree with the statement in below regarding in the fitness center.
(1) = Strongly disagree, (2) = Disagree, (3) = Neutral, (4) = Agree, (5) = Strongly Agree

No.	Service Quality	Expectation						Perception				
	I. Tangible Dimension	1	2	3	4	5		1	2	3	4	5
1.	The fitness center had modern looking equipment.											
2.	The physical facilities at fitness center were visually appealing.											
3.	Materials associated with the service in fitness center (such as pamphlets or statements) were visually appealing.											
4.	Workout facility had adequate directions for using the equipment.											
5.	Workout facility, physical facility, and locker room always looked clean.											
6.	Fitness center had comfortable temperature and adequate lighting.											
7.	The parking lot, and locker room had good safety qualities.											
8.	The accessibility to fitness center was easy, either using private or public transportation.											
9.	Staff of fitness center is neat in its appearance.											

	II. Reliability Dimension										
10.	Fitness centers did as they promise.										
11.	The fitness center performed the service right the first time.										
12.	Program schedule always performed on time, such as the program start and finish on time.										
13.	Fitness center provided its service at the time they promise to do so.										
14.	Fitness centers achieved error-free performance.										
	III. Responsive Dimension										
15.	Staff at fitness center provided information to customers exactly when the services will be performed.										
16.	Fitness center had variety of program such as diet program, body building program, cardio program etc.										
17.	When a customer had a problem, fitness center showed a sincere interest in solving it.										
18.	Staff at fitness center gave prompt service to you.										
19.	Staff at fitness center was always willing to help you.										
20.	Staff at fitness center was never being too busy to respond to your request.										
	IV. Assurance Dimension										
21.	The behavior of staff in fitness center instilled confidence for you.										

22.	You felt safe in your dealing with the fitness center.										
23.	Staff at fitness center was consistently courteous to you.										
24.	Staff at fitness center had the knowledge to answer your questions.										
	V. Empathy Dimension										
25.	The fitness center gave you individual care and attention.										
26.	The fitness center had convenient operating hours to all its customers.										
27.	Staff of fitness center gave personal service to you.										
28.	Fitness center had your best interests at heart.										
29.	Staff of fitness center understood your specific needs.										

SECTION THREE: Satisfaction

The satisfaction data questionnaire of fitness center. Please mark (✓) the degree that the best describes you either agree or disagree with the statements about the fitness center below.

(1) = Strongly disagree, (2) = Disagree, (3) = Neutral, (4) = Agree, (5) = Strongly Agree

No.		1	2	3	4	5
	Overall Customer Satisfaction					
1.	I satisfied with the specific services provided by fitness center.					
2.	I made the right decision to choose this fitness center.					
3.	I planned to revisit this fitness center in the future.					
4.	Overall, I satisfied with the equipment.					
5.	Overall, I satisfied with the classes.					
6.	Overall, I satisfied with the services.					

Additional question: Suggestions or opinions for improvements of fitness center in Semarang:

……………………………………………………………………………………

……………………………………………………………………………………

……………………

Appendix 2

Pertama-tama, peneliti ingin mengucapkan terima kasih atas partisipasi anda dalam proyek peneliti tentang Pengaruh Kualitas Layanan Terhadap Kepuasan Pelanggan di Pusat Kebugaran. Peneliti akan melakukan penelitian dengan cermat tentang informasi partisipan penelitian. Setiap informasi yang anda berikan akan dijaga kerahasiaannya. Selain itu, penelitian ini hanya digunakan untuk tujuan pendidikan.

Kuesioner ini terdiri dari 3 bagian, yaitu informasi umum responden, harapan dan persepsi dari kualitas layanan, serta kepuasan pelanggan. Penelitian ini dilakukan berdasarkan pengalaman masa lalu anda tentang kualitas layanan dan kepuasan pelanggan di pusat kebugaran sebelum pandemi Covid-19. Harap baca dan ikuti instruksi dengan cermat sebelum anda menjawab. Terimakasih atas kerja sama anda.

BAGIAN SATU: Informasi Umum dari Respondents

Pada bagian ini berisi pernyataan tentang informasi umum dari partisipan. Berilah tanda centang (✓) pada kotak yang sesuai dengan keadaan anda.

1. Sudah berapa kali anda mengikuti kelas pribadi?

    ☐ 0   ☐ sekali   ☐ 2 kali

    ☐ 3 kali   ☐ lebih dari 3 kali

2. Umur:

    ☐ Di bawah 19 tahun   ☐ 19 – 29 tahun   ☐ 30 – 39 tahun

    ☐ 40 - 49 tahun   ☐ 50 – 60 tahun   ☐ 60 tahun ke atas

3. Jenis kelamin:

    ☐ Perempuan   ☐ Laki - laki

4. Pendidikan:

    ☐ SMA ke bawah   ☐ Sarjana (S1)

    ☐ Pasca Sarjana (S2)   ☐ Doktoral (S3) ke atas

5. Berapa pendapatan bulanan anda dalam Rupiah? (1 THB = 440 IDR)

    ☐ Kurang dari 3,000,000   ☐ 3,000,000 – 5,000,000

    ☐ 5,000,000 – 10,000,000   ☐ Lebih dari 10,000,000

6. Status pernikahan:

    ☐ Lajang   ☐ Menikah

    ☐ Janda/Duda   ☐ Cerai

7. Apa pekerjaan anda?

   ☐ Pelajar   ☐ Pegawai Pemerintah

   ☐ Pengusaha   ☐ Karyawan Swasta

   ☐ Profesi lain, harap sebutkan……………..

8. Seberapa sering anda berkunjung ke pusat kebugaran?

   ☐ Kurang dari sekali seminggu ☐ Seminggu sekali ☐ Seminggu dua kali

   ☐ Seminggu tiga kali   ☐ Lebih dari tiga kali dalam seminggu

9. Tujuan mengunjungi pusat kebugaran adalah untuk:

   ☐ Menurunkan berat badan   ☐ Berlatih binaraga / angkat beban

   ☐ Menghilangkan stress   ☐ Bersosialisasi dengan teman

   ☐ Lainnya, harap sebutkan……………..

10. Sudah berapa lama anda menjadi anggota pusat kebugaran ini?

    ☐ Kurang dari 6 bulan   ☐ 6 – 12 bulan   ☐ 1 – 2 tahun

    ☐ 3 – 5 tahun   ☐ Lebih dari 5 tahun ☐ Bukan anggota

BAGIAN DUA: harapan dan persepsi kualitas layanan

Kumpulan pernyataan berikut berkaitan dengan harapan dan persepsi kualitas layanan di pusat kebugaran. Ekspektasi berkaitan dengan apa yang Anda harapkan dari pusat kebugaran, sedangkan persepsi berkaitan dengan perasaan Anda tentang pusat kebugaran yang telah Anda kunjungi.

Harapan:

Tunjukkan sejauh mana harapan anda terhadap pusat kebugaran berdasarkan pernyataan dibawah ini. Tidak ada jawaban benar ataupun salah. Apa yang kami minati disini adalah angka yang paling menunjukkan harapan anda tentang pusat kebugaran. Berilah tanda (✓) pada tingkat yang paling tepat menggambarkan anda baik setuju ataupun tidak setuju dengan pernyataan di bawah ini terkait pusat kebugaran.

(1) = Sangat tidak setuju, (2) = Tidak setuju, (3) = Netral, (4) = Setuju, (5) = Sangat setuju.

Persepsi

Tunjukkan sejauh mana anda yakin pusat kebugaran memiliki fitur yang dijelaskan dalam pernyataan dibawah ini. Tidak ada jawaban benar ataupun salah. Apa yang kami minati disini adalah angka yang paling menunjukkan persepsi anda tentang pusat kebugaran yang telah melayani anda. Berilah tanda (✓) pada tingkat yang paling menggambarkan anda baik setuju ataupun tidak setuju dengan pernyataan di bawah ini terkait pusat kebugaran.

(1) = Sangat tidak setuju, (2) = Tidak setuju, (3) = Netral, (4) = Setuju, (5) = Sangat setuju.

No.	Kualitas Layanan	Ekspektasi						Persepsi				
	I. Dimensi Berwujud	1	2	3	4	5		1	2	3	4	5
1.	Pusat kebugaran memiliki peralatan yang terlihat modern.											
2.	Fasilitas fisik di pusat kebugaran menarik secara visual.											
3.	Materi yang terkait dengan layanan (seperti pamphlet atau pernyataan) menarik secara visual di pusat kebugaran.											
4.	Fasilitas Latihan memiliki petunjuk menggunakan peralatan yang memadahi.											
5.	Fasilitas Latihan, fasilitas fisik, dan ruang ganti selalu terlihat bersih.											
6.	Pusat kebugaran memiliki suhu yang nyaman dan pencahayaan yang memadai.											
7.	Tempat parkir dan ruang ganti memiliki keamanan yang baik.											

8.	Aksesibilitas ke pusat kebugaran mudah baik menggunakan transportasi pribadi umum transportasi umum.										
9.	Penampilan staf pusat kebugaran rapi.										
	II. Dimensi Keandalan										
10.	Fitness center melakukan apa yang mereka janjikan.										
11.	Pusat kebugaran melakukan layanan dengan benar pada waktu pertama kali.										
12.	Jadwal program selalu berjalan tepat waktu, seperti program dimulai dan selesai tepat waktu.										
13.	Pusat kebugaran memberikan pelayanan sesuai janji.										
14.	Pusat kebugaran meraih kinerja bebas kesalahan.										
	III. Dimensi Daya Tanggap										
15.	Staff di pusat kebugaran memberikan informasi kepada pelanggan dengan tepat saat layanan akan dilakukan.										
16.	Pusat kebugaran meliliki berbagai program seperti program diet, program binaraga, program kardio dll.										
17.	Saat pelanggan memiliki masalah, pusat kebugaran harus menunjukkan minat yang tulus untuk menyelesaikannya.										
18.	Staf pusat kebugaran memberikan layanan yang cepat kepada anda										
19.	Staf pusat kebugaran selalu siap membantu anda.										

20.	Staff pusat kebugaran tidak pernah terlalu sibuk untuk menanggapi permintaan anda.										
	IV. Dimensi Jaminan										
21.	Perilaku staff pusat kebugaran menanamkan rasa percaya diri kepada anda.										
22.	Anda merasa aman dalam berurusan dengan pusat kebugaran.										
23.	Staf pusat kebugaran secara konsisten bersikap sopan kepada anda.										
24.	Staf pusat kebugaran memiliki pengetahuan untuk menjawab pertanyaan anda.										
	V. Dimensi Empati										
25.	Pusat kebugaran memberikan kepedulian dan perhatian individu.										
26.	Pusat kebugaran memiliki jam operasional yang nyaman bagi semua pelangganya.										
27.	Staf pusat kebugaran memberikan layanan pribadi kepada anda.										
28.	Pusat kebugaran mengutamakan kepentingan anda.										
29.	Staf pusat kebugaran memahami kebutuhan spisifik anda.										

Bagian Tiga: Kepuasan

Kuesioner data kepuasan pusat kebugaran. Harap tandai tingkat yang paling tepat menggambarkan anda baik setuju ataupun tidak setuju dengan pernyataan di bawah ini mengenai pusat kebugaran.

(1) = Strongly disagree, (2) = Disagree, (3) = Neutral, (4) = Agree, (5) = Strongly Agree

No.		1	2	3	4	5
	Kepuasan Pelanggan Secara Keseluruhan					
1.	Saya puas dengan pelayanan yang diberikan oleh pusat kebugaran.					
2.	Saya membuat keputusan yang tepat untuk memilih pusat kebugaran ini.					
3.	Saya berencana untuk mengunjungi kembali pusat kebugaran ini.					
4.	Secara keseluruhan, saya puas dengan peralatannya.					
5.	Secara keseluruhan, saya puas dengan kelas-kelas yang ada.					
6.	Secara keseluruhan, saya puas dengan pelayanannya.					

Pertanyaan tambahan: Saran atau pendapat untuk peningkatan pusat kebugaran di Semarang:

………………………………………………………………………………………

………………………………………………………………………………………

……………………

Appendix 3

The Research Ethics Review Committee for Research Involving Human Research Participants, Group I, Chulalongkorn University

Jamjuree 1 Building, 2nd Floor, Phyathai Rd., Patumwan district, Bangkok 10330, Thailand, Tel: 0-2218-3202, 0-2218-3049 E-mail: eccu@chula.ac.th

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COA No. 174/2021

Certificate of Approval

Study Title No. 124.1/64 : THE EFFECTS OF SERVICE QUALITY ON CUSTOMER'S SATISFACTION IN FITNESS CENTER IN SEMARANG INDONESIA

Principal Investigator : MR. SUYATMAN

Place of Proposed Study/Institution : Faculty of Sports Science,

Chulalongkorn University

The Research Ethics Review Committee for Research Involving Human Research Participants, Group I, Chulalongkorn University, Thailand, has approved constituted in accordance with Belmont Report 1979, Declaration of Helsinki 2013, Council for International Organizations of Medical Sciences (CIOM) 2016, Standards of Research Ethics Committee (SREC) 2017, and National Policy and guidelines for Human Research 2015.

Signature: Prida Tasanapradit

(Associate Prof. Prida Tasanapradit, M.D.)

Chairman

Signature: Raveenan Mingpakanee

(Assistant Prof. Raveenan Mingpakanee, Ph.D.)

Secretary

Date of Approval : 3 August 2021   Approval Expire date : 2 August 2022

The approval documents including:

1) Research proposal
2) Participant Information Sheet and Consent Form
3) Researcher
4) Questionnaire

Protocol No. 124.1/64
Date of Approval - 3 AUG 2021
Approval Expire Date - 2 AUG 2022

The approved investigator must comply with the following conditions:

1. It's unethical to collect data of research participants before the project has been approved by the committee.
2. The research/project activities must end on the approval expired date. To renew the approval, it can be applied one month prior to the expired date with submission of progress report.
3. Strictly conduct the research/project activities as written in the proposal.
4. Using only the documents that bearing the RECCU's seal of approval: research tools, information sheet, consent form, invitation letter for research participation (if applicable).
5. Report to the RECCU for any serious adverse events within 5 working days.
6. Report to the RECCU for any amendment of the research project prior to conduct the research activities.
7. Report to the RECCU for termination of the research project within 2 weeks with reasons.
8. Final report (AF 01-15) and abstract is required for a one year (or less) research/project and report within 30 days after the completion of the research/project.
9. Research project with several phases; approval will be approved phase by phase, progress report and relevant documents for the next phase must be submitted for review.
10. The committee reserves the right to site visit to follow up how the research project being conducted.
11. For external research proposal the dean or head of department oversees how the research being conducted.

บันทึกข้อความ

ส่วนงาน คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน กลุ่มสหสถาบัน ชุดที่ 1 โทร.0-2218-3202, 83049

ที่ จว 159/2564 (ผ)   **วันที่** 4 สิงหาคม 2564

เรื่อง แจ้งผลผ่านการพิจารณาจริยธรรมการวิจัย

เรียน คณบดีคณะวิทยาศาสตร์การกีฬา

สิ่งที่ส่งมาด้วย เอกสารแจ้งผ่านการรับรองผลการพิจารณา

       ตามที่นิสิต/บุคลากรในสังกัดของท่านได้เสนอโครงการวิจัยเพื่อขอรับการพิจารณาจริยธรรมการวิจัย จากคณะกรรมการพิจารณาจริยธรรมการวิจัยในคน กลุ่มสหสถาบัน ชุดที่ 1 จุฬาลงกรณ์มหาวิทยาลัย นั้น ในการนี้ กรรมการผู้ทบทวนหลักได้เห็นสมควรให้ผ่านการพิจารณาจริยธรรมการวิจัยได้ ดังนี้

       โครงการวิจัยที่ 124.1/64 เรื่อง ผลกระทบของคุณภาพการบริการที่มีผลต่อความพึงพอใจของผู้ใช้บริการในฟิตเนสเซ็นเตอร์ในเมืองเซมารัง อินโดนีเซีย (THE EFFECTS OF SERVICE QUALITY ON CUSTOMER'S SATISFACTION IN FITNESS CENTER IN SEMARANG INDONESIA) **ของ Suyatman** นิสิตระดับมหาบัณฑิต

       จึงเรียนมาเพื่อโปรดทราบ

(ผู้ช่วยศาสตราจารย์ ดร.ระวีนันท์ มิ่งภัคนีย์)
กรรมการและเลขานุการ
คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน
กลุ่มสหสถาบัน ชุดที่ 1 จุฬาลงกรณ์มหาวิทยาลัย

Appendix 4

No.64.24/0543

Faculty of Sports Science
Chulalongkorn University
Rama I Rd., Phathumwan,
Bangkok 10330, Thailand

August 06 , 2021

Subject: Certification Letter of Mr. Suyatman

To whom it may concern,

      I am writing this letter to certify that Mister Suyatman is a Master student in Sports Management at Faculty of Sports Science, Chulalongkorn University. He is now doing his research under the title of "THE EFFECTS OF SERVICE QUALITY ON CUSTOMER'S SATISFACTION IN FITNESS CENTER IN SEMARANG, INDONESIA" which is a partial fulfillment of the requirement of his study at the Faculty of Sports Science, Chulalongkorn University under a supervision of Kaveepong Lertwachara, DBA.

Your kind consideration for the survey which is a part of his research is extremely appreciated and grateful.

Yours sincerely,

Assist. Prof. Sitha Phongphibool, Ph.D
Dean
Faculty of Sports Science

Dear

- The owner of Duta Fitness Center, Semarang

- The owner of Power Gym Cintadui Body Fit Fitness Center, Semarang

- The owner of Sus Family Fitness Center, Semarang

- The owner of Men's Gym Fitness Center, Semarang

- The owner of Flozor's Fitness Center, Semarang

- The owner of MBC Fitness Center, Semarang

- The owner of Hart Gym Fitness Center, Semarang

- The owner of Jokytos Gym Fitness Center, Semarang

- The owner of Satrio Fitness Center, Semarang

- The owner of Joker Gym Fitness Center, Semarang

- The owner of Fitsoul Gym Fitness Center, Semarang

- The owner of Anhesa Gym Fitness Center, Semarang

- The owner of Summit Gym Fitness Center, Semarang

- The owner of Treetop Fitness center, Semarang

VITA

NAME   Suyatman

DATE OF BIRTH   02 June 1995

PLACE OF BIRTH   Wonosobo

**INSTITUTIONS
ATTENDED**   Bachelor of Education (Sports Coaching Education
                            Department), Faculty of Sports Science, Universitas
                            Negeri Semarang.

HOME ADDRESS   Sirebut RT 01, RW 04, Adiwarno, Selomerto Subdistrict,
                            Wonosobo District, Jawa Tengah Province, Indonesia.

AWARD RECEIVED   ASEAN and NON-ASEAN Scholarship