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IMPACT OF TOTAL QUALITY MANAGEMENT PRACTICES ON CUSTOMER SATISFACTION: PERSPECTIVES OF MEDICAL DEVICE COMPANY

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ABSTRACT

Customer satisfaction is an asset that should be protected and retained just like any other asset in an organization. The management needs practices that promote customer satisfaction in an organization's service provision. The study objective was to determine the effect of Total Quality Management (TQM) practices in medical device companies in Malaysia on customer satisfaction. This research aimed to establish quality management practices among Malaysia's medical device manufacturing industries and determine their influence on customer satisfaction. The study involved a descriptive overview that undertook a cross-sectional survey design to establish the TQM practices and customer satisfaction in several medical device companies in Malaysia. The study population was employees from various divisions and positions in the medical device industry. Qualitative research methodology has been applied due to the large number of respondents who participated. Data was captured through the interview process and research questionnaire to evaluate the respondents focusing on quality control activities and customer satisfaction in the medical device industry. This qualitative analysis was employed to help this study which seeks to identify cause and effect relationships. Further studies may embark on a larger scale of respondents to better overview the current practices in medical device companies.

Keywords: Total Quality Management, Leadership, Customer Focus, Continuous Improvement, Training and Development, Medical Device Company, Malaysia.

INTRODUCTION

Quality has become a top priority for all manufacturing sectors, especially as customers increasingly demand better products at lower prices (Islam & Karim, 2011). Al-Hariri (2016) regarded quality as efficiency and efficiency. Obaid (2017) considered quality as a production management strategy. The fundamental of quality has long been focused upon developing and implementing a corporate-wide culture. The main emphasis is given to customer focus, continuous improvement, employee empowerment, and data-driven decision-making (Kenyon & Sen, 2015).

Quality management is a systematic approach to quality assurance for comprehensive administration to increase quality, reliability, customer satisfaction, and productivity (Gharakhani, Rahmati, Farrokhi & Farahmandian, 2013). Implementation of Total Quality Management practice empowers associations to increase internal efficiencies, which are considered necessary for ending up aggressively in the global commercial center. Flynn (2014) argued that TQM is an iterative and continuous process. It prevails to the degree that groups can work out how to find problems and effectively fix them.

Companies that embrace a quality management methodology center to achieve and support top-notch yields using data sources and quality execution as yields (Flynn, Schroeder & Sakakibara, 2014). It showed that TQM is commonly used as a multidimensional way of estimating authoritative execution, where both money-related and non-budgetary steps recognize parallel meaning. The advantages of incorporating TQM can be expressed in greater organizational performance and operating systems performance, hence an increase in customer satisfaction. Malkawi et al, (2017) note that job performance gives an indication of the organization's success in achieving its objectives and mission. The dynamic environment in which businesses operate with emerging technologies has forced new businesses to change for the better and sustain their business operations. Kelderman (2021) highlighted that customer satisfaction is gained with QMS through the arrangement of people, processes, and technology during the product life cycle.

The changing world in which companies work, marked by evolving technology, has required new ways of operating rivals to adapt for the better and maintain their operations. Some of the company sustainability initiatives include the implementation of QM (Sousa & Voss, 2002). QM can be defined as a set of guidelines, procedures, and practices that concentrate on consumer needs and desires and work together as the core principles of quality management that offer solutions to businesses by demonstrating what to do and how to improve (Kelderman, 2021). Firstly, establishing monitoring systems for customer satisfaction needs to be in line with appropriate methods for measuring customer attitudes and complaints. This could include satisfaction surveys, complaint procedures, analytical applications to measure satisfaction trends and, management reviews of customer satisfaction (Kelderman, 2021).

Nowadays, the growth of the service sector has intensified the researchers' interest in service quality. The main objective of TQM is to develop a management structure and corporate culture to enhance customer loyalty, which requires a systematic method for the continuous improvement of

organizational processes, resulting in high-quality products and services (Waldman, 1994). However, most of what has been written on TQM is generally associated with manufacturing-related organizations (Agus & Abdullah, 2000; Agus, 2000; Ljungstrom & Klefsjo, 2002), while its principles and concepts can also be implemented in service organizations. A quality system such as TQM could lead to a better quality of service and better organizational performance (Cook & Verma 2002). In contrast, market-oriented behavior is critical for any organization to compete in the industry. However, most of what was written on TQM is usually related to manufacturing companies, although it is widely believed that TQM's concepts and principles are equally relevant to service organizations.

Nagalingam and Anuar (2020) highlighted that comprehensive and strong quality management is vital for companies to offer a wide range in the services industry. Their finding is one of several studies which recorded the same result. These results reinforce the assumption that TQM is not an organizationally guided success technique for TQM critics. Marking TQM as not an appropriate performance-driven technique, however, is never a settled debate. On the other hand TQM's supporters, the negligible relationship between TQM and success may be attributed to implementation problems rather than TQM as the subject matter. In other words, rather than accuse TQM without knowing the real picture, the real response could be uncovered. Some organizations adopt TQM either to be part of the QM crowd or to be called a minimalist. This TQM implementation methodology is hardly capable of producing meaningful outcomes.

Furthermore, this limited implementation approach runs contrary to TQM's ideology which is that if TQM is to be implemented, it must be done with complete dedication. The literature has stated that the minimalist approach to TQM implementation does not contribute positively towards successful results. Therefore, the strength of implementing TQM is one of the potential explanatory factors for TQM is efficient or not. But this topic remains uncertain, and researchers deserve urgent attention.

Customer satisfaction is an asset to be tracked and handled in the same manner as any other asset in an organization. Colleges of the middle level are educational institutions whose principal business is to please their clients. The Customer Satisfaction Index (CSI) indicates that in cases where satisfaction abounds, quality service, variety of services and products, complain tactfully handling and meeting standards is normal.

Organizational, where there are bad management and practices, employees' performance is not motivated at long last is not healthy. Belay, Helo, Takala, and Kasie (2011) analyzed the impact on business performance of quality management activities and concurrent engineering and found a direct connection between total quality management and concurrent engineering and business performance improvement for business performance improvement organizational. The study, however, was qualitative in nature and used a case that does not provide definitive conclusions.

Under this assumption, this study examines how quality management strategies such as customer orientation, training instruction, leadership style, service enhancement, facilities, and processes in the manufacturing industries of medical devices affect customer satisfaction. The study's specific objectives are as below:

- To establish quality management practices among medical device manufacturing industries in Malaysia.
- To determine TQM influence on customer satisfaction in medical device companies in Malaysia.
- This research attempts to address the questions of:
- Is there a relationship between quality management practices and customer satisfaction in Malaysia's medical device manufacturing industries?
- How do TQM practices affect customer satisfaction in Malaysia's medical device manufacturing industries?

LITERATURE REVIEW

Theory of Total Quality Management (TQM)

Total Quality Management (TQM) is a management philosophy that involves everybody in a company in an ongoing effort to improve quality and satisfy customers. The word "Total" means it refers to all aspects in which it seeks to please both internal and external customers. It extends the conventional definition of quality by looking at the quality of any component of the process that creates the product and service, rather than looking at the quality of the finished product or services only.

Dotchin and Oakland (1994) mentioned that while TQM is closer to manufacturing firms, the concepts and principles underlying it are equally applicable to the service sector. Therefore, it can be implemented in manufacturing firms and service organizations since both manufacturing and service organizations aim to meet consumer expectations and wishes.

TQM is a historically unique approach to improving organizational efficiency with solid conceptual foundations, which at the same time offers a strategy for improving business performance, taking into account the way organizations and their employees work. In QM strategy, the critical success factors include customer satisfaction that contributes to retention, improved employee engagement, quality leadership, process management, and improvement.

The Marketing Theory has identified the value of meeting and exceeding customer standards (Customer Satisfaction). Furthermore, it has been observed that high-quality organizations can recognise their internal and external customers, decide precisely what their needs are, and coordinate all organizational activities such as marketing, production, finance, and human resources management to meet their customers' needs (Feigenbaum, 2011).

(TQM) defined as a working environment in which workers obtain the ability, trust, and commitment to improve productivity, meet the needs and desires of the clients, and achieve the objectives and values of the organization (Obeidat et al., 2018; Besterfield et al., 2014). TQM practices require decisions to delegate to the average and operational level. The process of delegating and involving staff to make decisions about their tasks is a good motivational method and sensitizes them to the decisions they make (Juda, 2014).

Quality management is a systematic approach to quality improvement for firm-wide management to improve quality, productivity, customer satisfaction, and profitability (Gharakhani, Rahmati, Farrokhi & Farahmandian, 2013). Implementing quality management techniques allows organizations to improve internal efficiencies, which are considered a prerequisite for global market competitiveness. Sousa and Voss (2012) indicate that quality control is demonstrated by the organization's activities in which managers make use of to achieve company improvements.

Total Quality Management (TQM) is a management philosophy in which a company works, aiming to maximize efficiency and increase the satisfaction of customers. The theory is holistic, applicable to all (total) with the goal of pleasing all customers, both internal and external, specifically consumers of the goods and services (quality) of the customers and following the collection of examples and strengthened in the organizational (management).

It is a management process and a corporate philosophy that recognizes that it is impossible to different customer needs and business goals (Agus, Krishnan, & Syed, 2000). TQM is a philosophy of management and strategies designed to achieve long-term market performance by providing customer satisfaction through a focus on quality and continuous improvement in all business processes. Quality here means the production of quality goods and services and includes all of an organization's operations and activities. At this point, in an organization, quality will be expressed in many ways, such as management effectiveness, employee performance, operating systems productivity, and so on.

There are eleven TQM practices: Management Engagement, Quality Department role, Training and Education, Employee Engagement, Continuous Improvement, Supplier Partnership, Product / Service Design, Quality Data and Reporting Policy, Quality Enhancement Communication, and Customer Satisfaction Orientation. From another point of view, eleven TQM implementation constructs include top management support, customer attention, employee engagement, employee empowerment, supplier quality management, process improvement, service design, quality compensation, benchmarking, and cleanliness.

Customer Satisfaction

Consumer satisfaction is at the heart of every business strategy and goal that focuses on generating value for consumers, forestalling and managing customers' demands, and signifying capability and duty that will meet customer needs. Provision of high-quality services and customer satisfaction are critical points in any organization's growth and development. Providing quality services is therefore crucial in achieving sustainable organizational efficiency. According to Kotler (2000), customer satisfaction is the sense of pleasure or dissatisfaction in a person resulting from matching the perceived output of a product.

The degree of satisfaction can vary based on the experiences of the customer and the subsequent immediate circumstances. Satisfaction has many elements that include but are not limited to: friendliness, quality of service, good value, courtesy, knowledgeable and supportive customers, reasonable pricing, quality of service, and fast service. Oluseye et al., 2014; and Hansemark and Albinson (2004) described customer satisfaction as the overall customer attitude towards a service provider or the discrepancy between customer expectations and customer perceptions regarding the fulfillment of such wishes, wants, desires or objectives. Customer satisfaction is, an outcome of

purchasing and usage arising from the purchaser's assessment of benefits and product costs in relation to the expected consequences (Fornel et al.,1996).

Medical Device Manufacturing Industry

According to the Global Health Care Equipment & Supplies Industry Profile (2014), the medical device manufacturing sector involves manufacturing disposable equipment and supplies such as syringes, catheters, electrodes, sutures, bandages, implantable prostheses, orthotics, and prosthetics. It also includes ontological and medical aids such as hearing aids and wheelchairs; ophthalmic equipment such as eyeglasses, contact lenses, and ophthalmoscopes; in-vitro diagnostics such as devices for medicinal chemistry, microbiology, immunology, and genetic testing; and other equipment such as radiotherapy imaging equipment, films and equipment, dialysis, endoscopy, and many others.

The global medical device market is increasingly expanding, as demand from the end markets is gradually rising (Wang, 2013). It is believed that the medical device industry is growing at a high pace and that sustained growth in the future is expected. That is why multinationals are actively exploring the market.

There is a tremendous investment in foreign brand research and development and in improving operational efficiency so that operators can take advantage of opportunities on the global market.

According to Fortune Business Insights (2018), it is estimated that the global medical devices market size was valued at USD 425.5 Billion in 2018 and is expected to reach USD 612.7 Billion by 2025. It may grow at a CAGR of 5.4% from 2018 to 2025. Definitely, what drives investment and profitability in this sector is the steady increase in customer demand especially due to the covid-19 pandemic (OECD, 2020). Whereas, it is expected the growth in China to continue and by 2020 to reach \$1.19 trillion (Huang, 2019).

Despite the industry's tremendous growth rate, it is marked by intense competition (Wang, 2013),

and highly regulated climate. Industry players often find like a lot of time is spent dealing with rules that guide their work rather than actually doing the job itself. However, the enduring existence of the health care legislation stems from the fears that life is at risk. Therefore, medical device manufacturers and their design engineers require a well-organized network of subcontractors and suppliers with the capacity and expertise to supply quality materials to meet regulatory standards and meet global market demands (Koepfer, 2010).

Customer Relationship Management Theory

The core element in customer relationship management theory is focused on deciding how a company can track customer interactions so productively that customer relationships can move forward. Meanwhile, it is also important to determine how consumer needs data can enter the organization to such a degree that it may identify potential wishes for its customers and retain them afterward.

In postulating the theory's relevance to enhancing consumer service-oriented activities, consumers are keen to purchase a brand and believe they should be regarded as accomplices. This way starts by determining what the consumers need and then integrating those prerequisites with products or administrations. At that point, what the association provides should have a "production ability"

component, so that the item can be expanded later as per the client's prerequisites, lifestyle, and usage examples.

Organizations pursue clear enhancement in line with their separate nations' nonstop enhancement outline, with the primary emphasis being on ensuring that consumers stay at the core. The author also points out that some organizations have gone much further in integrating those values into their visions. Three principles drive them: shifting the consumer to gain mindset through enhancing administration transparency through management emphasis and innovation stages, using innovation to enhance profit conveyance and advance consistency, changing staff minds to move from focusing on authorization to building citizens' trust by compelling support. The theory has been used to describe a component of customer orientation.

Training and Development on Customer Satisfaction

Cooney, Terziovski, and Samson's (2012) study investigated the training of staff, quality control, and efficiency of Australian and New Zealand manufacturing companies. A mail survey was conducted of the Australasian manufacturers. The survey was sent to 3,000 manufacturing sites in Australia and 1,000 in New Zealand that was randomly chosen from manufacturing sites employing more than 20 people and registered with the Australian Statistics or Statistics Bureau New Zealand. The study found that when combined with Overall Quality Control, employee training is found to have a more important effect on organizational efficiency.

The research at Safaricom Limited Call Center adopted a case study approach where data were collected across a population by sampling 340 employees at the Call Center, which forms the Safaricom Customer Care Division. The survey included executives, support/analyst, and customer service. Primary data were obtained using interviews and both structured and unstructured questionnaires. The study concluded that continuous training and development is required to consider the competition, market dynamics, customer satisfaction, and net promoter ranking. The study of Lee (2012) analyzed the scale of the company and the quality of customer service training. The study tested the enterprise size moderation effect on the relationship between training and customer service among 735 firms. Unique elements include the positioning of training within an overall high-performance HR structure, the resulting customer experience, and South Africa's background. The benefits of Customer Service Training increase significantly with firm size, with significant benefits occurring only in large companies.

Customer Orientation and Customer Satisfaction

The Hawa (2015) study examined the effect of customer orientation on customer satisfaction and the mediating effect of the quality of service. The study population consisted of pharmacy customers one in its 41 branches located in Amman, offering clients different pharmaceutical services when needed. The researcher selects a convenience sample from the customers who will visit one branch pharmacy during the study period, consisting of (248) respondents. The study found a significant statistical effect of customer orientation on customer satisfaction and a significant statistical effect on customer satisfaction from service quality.

Study Kim (2014) explored the mediated impact of consumer orientation on success in customer relationship management. The study findings indicate that the effect of customer orientation on

customer relationship management (CRM) performance is mediated by the training orientation and customer information processing. The empirical results suggest theoretical and managerial implications for the application and strategies of CRM.

Mokhtaran and Komeilian (2016) study examined the effect of customer orientation on Dana insurance performance, taking into account the intermediary role of customer relationships and quality management of services. 80 Dana insurance representatives were sampled at random in Tehran, Iran. A cross-sectional descriptive survey design was used, and data was collected through literature review and a 55-piece questionnaire validated through a panel of experts. The study revealed that customer orientation has a significant positive effect on customer relationship management and quality of service at the Dana Insurance company.

Continuous Improvement and Customer Satisfaction

Maletic, Maletic, and Gomisek (2012) investigated the relationship between continuous improvement and performance in maintenance. To address the research problem, the empirical data for this study was drawn from a survey of Slovenian organizations. Several statistical methods applied, including correlation analysis, regression analysis, and the principle component analysis (PCA), are used. It was found that the continuous improvement in maintenance performance is significantly and positively related. Furthermore, research advocates the importance of incorporating quality management practices into maintenance processes.

Mohammed (2017) examined non-profit Organizations' continuous improvement strategies. The population in Delaware for this study has been leaders of non-profit organizations. Participants were purposefully selected to implement continuous improvement strategies in non-profit organizations for their successful experience. The data were gathered from 4 non-profit organizational leaders through semi-structured face-to-face interviews. The analysis is done by inductive coding of phrases and words using methodological triangulation. It was found that Non-profit leaders could use continuous improvement strategies to boost performance and revenue.

Lizarelli and Toledo (2016) investigated practices for the continuous improvement of the product development process focused on a multiple case comparative analysis. Product development process mainly in continuous improvement practices is the study's central focus. It was found that some improvement practices in the PDP, particularly those related to identifying barriers to CI implementation, structuring improvement projects, and encouraging improvement actions in the PDP, still have difficulty in implementing. Despite the difficulties, for the companies studied, the implementation of CI practices in the PDP was identified as being highly significant.

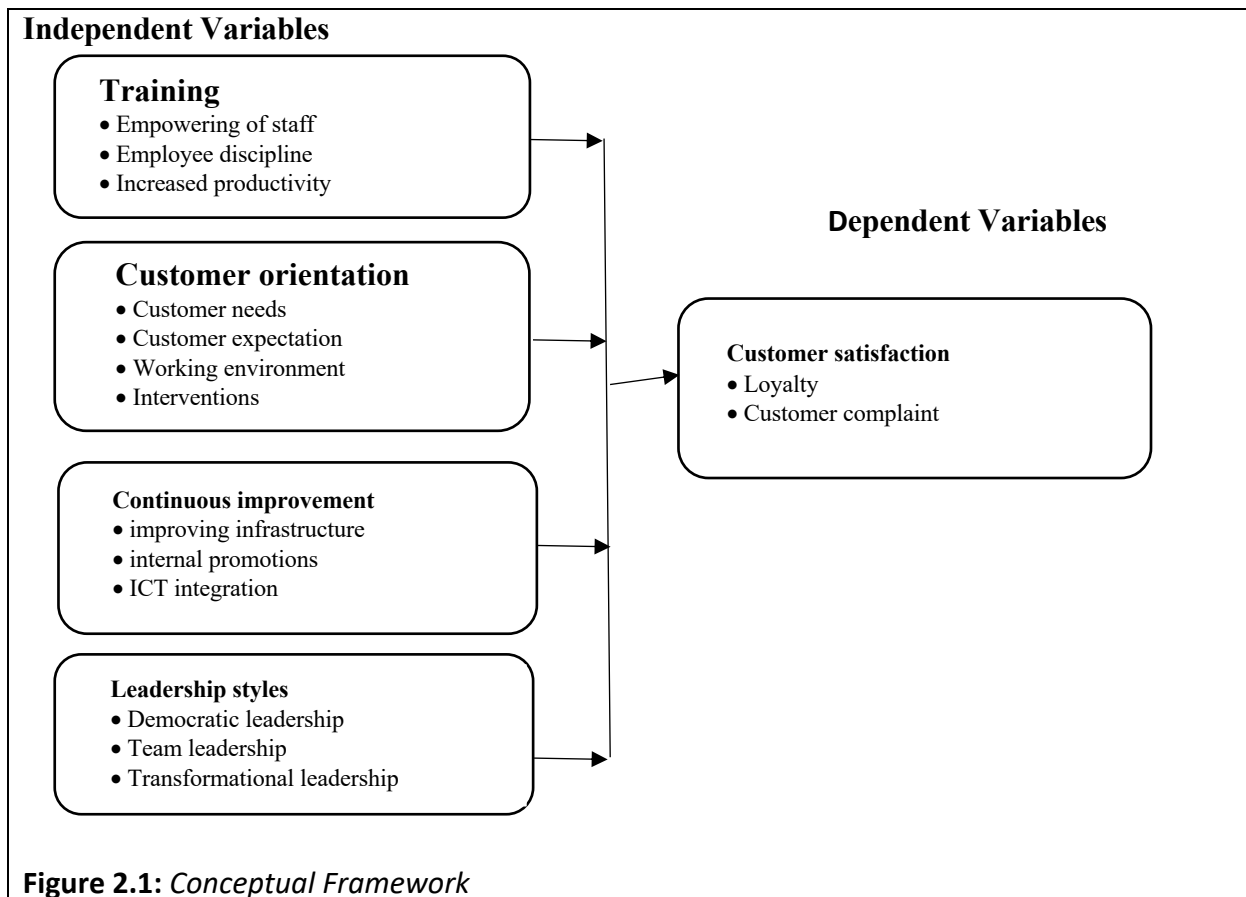
Leadership Style and Customer Satisfaction

Pantouvakis and Patsiouras (2016) conducted an exploratory study on the role of leadership style in the link between the quality of service and customer satisfaction: evidence from a B2B environment. A special survey instrument with the use of exploratory factor and regression analyses was developed and tested. Data from 118 small businesses were collected through personal interviews, and results supported that leadership style moderates the relationship between quality of service and customer satisfaction despite what is commonly believed to be a prerequisite for quality of service.

Gashti, Torbehbar, and Farhoudnia (2015) found the relationship between types of leadership, employee satisfaction, and loyalty. The data collection method applied was using a survey questionnaire. This research used descriptive statistics and inferential statistics. It was found that managers use conventional leadership styles in the Iranian automotive industry as dominant models and the low average level of employee satisfaction. It confirms that leadership styles in Asian automotive industries are significant organizational antecedents of work satisfaction and loyalty.

Salahat and Majid (2016) compared leadership styles to Palestinian insurance sector customer satisfaction: mediating employee performance function. Using data from a survey of 258 insurance company employees who have direct customer relationships, this study measures a structural equation model related to leadership styles (transactional and transformational), performance of employees, and customer satisfaction.

The evidence shows that neither transactional nor disruptive leadership style directly affects customer loyalty. On the other hand, the relationship between leadership styles and customer satisfaction is partly influenced by the output of the employees. TQM seeks to create a distinct culture based on the efforts of all members of the organization to meet the customers' needs and their desires at the lowest cost, effort, and time. This indicates that TQM has become important to organizations through reducing costs, increasing profits and productivity, increasing customer satisfaction, achieving competitive advantage and high returns (Fernandes, 2017). Figure 2.1 presents the study's conceptual framework depicting the relationship between the independent and dependent variables of this study.



RESEARCH METHODOLOGY

Qualitative research has been used to conduct this research study due to the large number of respondents who participated and where evidence is evaluated and generated. This method is used to describe to the relationship between (organizational culture, organizational commitment and person-organization fit) will affect the turnover intention. So, the casual research design has been used in this research which seeks to identify cause and effect relationships which are based on age, gender, education level, income level, and race. As a result, it can help generate different perceptions among the respondent to obtain accurate results in the research.

The distribution of questionnaires to each medical device company was done through email and face-to-face distribution. The questionnaires distributed to the medical device company in Penang and interviewed were face-to-face. Meanwhile, the questionnaires distributed to the rest of the other companies were through email and phone call interview since the location is outside Pulau Pinang, Malaysia. A brief introduction was given to all the respondents to gather the information. Identities of respondents being anonymous in order to protect their privacy, company policy and to ensure they feel free to participate in the survey.

Population and Sampling

Due to time, financial, and human resource constraints, samples were taken from the employee in several departments for each of the selected medical device manufacturing industries in this research, so it is assumed that the sample would give researchers more reliable results (Sekaran, 2003). The study population was drawn from several medical device manufacturing industries in Malaysia. A total of 20 respondents participated in the interview and answered the questionnaire. Four medical device manufacturing industries were selected to participate in this study. There was one company from Penang, two companies from Perak, and one company from Selangor. These interviews and questionnaires were distributed among employees who work directly or indirectly with clients. The preference for employees with a customer-facing position is born because they are assumed to know more about customers. This is because they have regular contact with them and are expected to know what the customers complain about. The operations manager for the four medical device manufacturing industries who participated in the interview also provided their insight into the medical device manufacturing activities and the quality approach to the product produced. Thus, the analysis is equally represented by the four companies' understudy.

ANALYSIS AND FINDINGS

General Information

The study was based on a sample of 20 respondents. From the questionnaires, 20 out of 20 sampled respondents filled in the questionnaires completely and participated during the interview session, constituting a 100% response rate. This was considered a good representative of the sampled population. From the findings, 70% who were the majority were bachelor's degree holders, and 30% held a master's degree. This implied that the respondents were well educated and could rely upon to understand and respond to the study. It was evident from the findings that the manager level was 20% while the executive level was 80%. This depicted that the study got responses from the targeted

sample, and therefore, the findings could be relied upon. The study sought to determine the number of years the respondents were in operation in the organization and 65% who were the majority had worked for between 6 to 10 years and 35% had worked for Less than 5 years. These findings show that the respondents had accumulated enough experience and were therefore knowledgeable about the subject under study. The respondent was also evenly distributed from various department, which was 25% each from Customer Service, Quality Assurance, Development, and Operation.

Customer Focus

There are five focus that in relation to customer satisfaction in Medical Device Companies. They are training and development, customer orientation, continuous improvement, leadership styles, and evaluation of customer satisfaction. Complaint Part per Million (CPPM) provided by customer service for Penang company is 0.0002, company in Perak were 0.0005 and 0.0009 each, meanwhile company in Selangor is 0.0004. Based on each company's Complaint Part Per Million (CPPM), we observed that the company in Penang has the lowest customer complaint received, as shown in Table 4.3.

It is plausible that customer complaints, as negative and potentially stressful stimuli, will be perceived more negatively by service personnel with high negative affectivity. In their attempts to reduce the stress of customer complaints, service personnel is likely to employ "avoidance" coping strategies such as ignoring customers or rejecting legitimate customer requests. Customer complaints, therefore, could be expected to have a greater negative association with a commitment to customer service.

Table 4.1:

CPPM customer complaint about each company

Company	Complaint Part per Million (CPPM)
Ambu Sdn Bhd (Penang)	0.0002
Teleflex Medical Sdn Bhd (Perak)	0.0005
Latexx Manufacturing Sdn Bhd (Perak)	0.0009
SteriPack Asia Sdn Bhd in Selangor	0.0004

Education and Training

The study investigated the relation of Training and Development to customer satisfaction and how it may impact. Almost all the respondents were satisfied with the training that their company provided. However, one respondent from the company in Perak is not satisfied enough. The respondent mentions that the company only provided in-house training where the content was insufficient. Overall, all respondents agree that improving the quality of customer service through training leads to an increase in customer satisfaction.

Customer Orientation

The next focus was sought to find out the effect of customer orientation on customer satisfaction in a Medical Device Company. The respondents were given a list of statements and questions regarding the influence of customer orientation on customer satisfaction to indicate the extent to which they agreed. All respondents from the company in Penang positively answer and agree with the statement provided. The company is always committed to meeting customer needs. Meanwhile, there is an inconsistent answer provided from both companies in Perak and Selangor. Most customers from the company in Penang and Selangor retain the customer. Some of them have already retained more than ten years.

Continuous Improvement

The next focus sought to find out the effect of continuous improvement on customer satisfaction in Medical Device companies. The respondents were given a list of statements and questions regarding the influence of continuous improvement on customer satisfaction to indicate the extent to which they agreed. The company in Penang shows the highest number of improvement projects initiated to meet and exceed customer needs and requirements. All respondents agree that continuous improvement culture has been shown to boost employee engagement and reduce turnover rates leading to customer satisfaction. Only one of the companies in Perak don't have an expansion project within the year 2020 and 2021 period. The rest company has over three expansion projects.

Leadership Styles

The next focus sought to examine the extent to which leadership style influences customer satisfaction in Medical Device companies. The respondents were given a list of statements and questions regarding the influence of leadership styles on customer satisfaction to indicate the extent to which they agree. The majority of the respondents strongly agreed that transformational leadership raises the needs and motivations of employees and promotes dramatic change them promoting development. However, several respondents didn't satisfy with the task assigned by their manager.

Customer Satisfaction

The study sought to establish how quality management practices influence customer satisfaction in Medical Device companies. All medical device companies in this study received orders from customers every month throughout the year. Overall, all companies also received customer feedback on dissatisfaction with the product or service provided. However, based on the customer complaint CPPM, the company in Penang observed the lowest CPPM as shown in Table 4.3, which means the customer is most satisfied compared with other companies in this study.

DISCUSSION AND CONCLUSION

In practice, research will be necessary for the manufacturing of medical devices industries in Malaysia as it will be able to assess and understand the effect of introducing and applying TQM within their organization. They will also be able to take full advantage of the impact of the TQM to increase customer loyalty within their organizations. The study will also help regulatory authorities and government identify the benefits that follow the implementation of QM systems in manufacturing

industries in general and promote their performance through efficient and acceptable policies and regulations.

The study concludes that training and development have positive and significant influence on customer satisfaction in Medical Device companies. The organization conducts training programs for its employees to enhance the skills that they each need to improve and learn programmed to increase the level of their employees so that they all gain similar skills and knowledge. In a Medical Device Business, consumer orientation has a positive and important impact on customer satisfaction. Customer orientation is critical for customer satisfaction, and customer orientation activities have the greatest impact on time-based performance. Customer satisfaction could be improved by effective and participative management that focuses on the needs of customers.

In a Medical Device Company, continuous improvement has a positive and vital impact on customer satisfaction. A continuous improvement is a form of continuous improvement in which an organization goes about its business as usual while looking for new ways to develop its goods, services, and processes. In Medical Device Companies, leadership styles have a positive and vital impact on customer satisfaction. Leadership is a critical management role that aids in maximizing productivity and achieving organizational objectives. Knowing the right leadership style allows for an encouraging partnership margin and the creation and maintenance of momentum and the development of leadership momentum.

Recommendations

This study recommends that Medical Device Company implement Total Quality Management (TQM) practice. The company should implement a training and development program for activities that contribute to efficient business operations, gain a thorough understanding of the institution's environment, gain insight into training and development options, and establish a career development strategy to integrate workers into organizational effectiveness and information sharing to increase customer satisfaction. To customer service, the business should ensure that workers foster a caring atmosphere. Establish clear lines of contact with their customers and have a good understanding of what they want. To stay competitive, they must constantly develop their products, services, and processes and maintain an organized and clean workspace that promotes improved functionality, reliability, and productivity. By being more successful and balanced at leading others, company management should draw on the shortcomings and strengths of its leadership style. With this information, managers will be able to build goals and a training plan to help them become better leaders.

Limitation and future research

The information needed for the study was gathered through an interview and a questionnaire, with the expectation that the responses were as reliable and truthful as possible, which cannot be guaranteed since some respondents could provide responses that they believe are necessary. Furthermore, a corporate policy prohibits the sharing of such data with third parties.

Because of the existence of the topic respondents, some respondents were unable to share details about QM activities for fear of being reprimanded by the organization's managers, who are in charge of dealing with issues related to the research.

This study focused solely on TQM activities that affect customer satisfaction at a Medical Device Company. There are, however, other TQM activities that contribute to consumer satisfaction in industries other than the medical device industry. As a result, it is suggested that more research on TQM activities be conducted in order to identify and investigate additional areas of focus that influence TQM output in other industries.

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