

Operating Mechanism of Acquired Immune System Health of Quality Improvement Team in Manufacturing Enterprises

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Keywords: Quality improvement team, Acquired immunity, System health, Operating mechanism.

Abstract: In the context of today's "Quality Powerful Country" strategy, the importance of "quality" is self-evident. Unswervingly building a high-quality country is an inevitable requirement for high-quality development. Therefore, high-quality development has become the goal pursued by many manufacturing companies, which also highlights the important position of quality improvement teams in manufacturing companies. In order to make the quality improvement team of a manufacturing company operate quickly and efficiently, the health of the immune system of the quality improvement team of the manufacturing company should first be improved. Therefore, this study aims at related issues, uses the principle of bionics, takes the quality improvement team of the manufacturing company as the research object, and takes the acquired immunity as the starting point. It conducts research around the three elements of tissue quality acquired immunity, and explores how the quality improvement team of the manufacturing company can obtain The operating mechanism of the health of the immune system, the pre-dependent variables are selected as self-quality supervision, organizational learning ability, and organizational forgetting; the mediating variables are organizational quality monitoring, defense and memory; the moderating variable is internal control; the outcome variable is immune system health, common Construct its theoretical model and study its operating mechanism. The study of this mechanism not only provides a relevant theoretical basis for the healthy operation of the immune system of the quality improvement team, but also makes a great contribution to the realization of the high-quality development of manufacturing enterprises.

1. Introduction

Quality is the life of an enterprise, and no enterprise can do without quality. In such a turbulent social environment, quality improvement and optimization have gradually become a key step for

enterprises to win the competition [1]. Enterprise quality improvement is a part of quality management. Its ultimate goal is to obtain higher-quality products or services, and achieve the goal of high-quality development of the enterprise through some methods. In recent years, manufacturing enterprises have gradually developed. As the foundation of the country, manufacturing enterprises should pay more attention to their own internal quality problems, optimize their own structure, and improve the quality of products and services. The team is an indispensable part of quality management. Due to the particularity of the manufacturing enterprise's own quality requirements, the quality improvement team especially occupies an important position in the manufacturing enterprise. To put it simply, an enterprise quality improvement team is a team specially formed to address the quality problems of the enterprise itself and to optimize the quality of its own products and services, so that the enterprise can efficiently and quickly achieve the quality improvement goals and occupy a greater competitive advantage. The quality improvement team runs through the overall internal and external cooperation network of the enterprise, which helps to improve team learning and solve complex quality problems, deeply understand and strengthen quality improvement practices [2-4].

In today's society, the cross-combination of management and biology has become a general trend, and many biological theories are also generally applicable in management. In recent years, the concept of "immunity" in biology has been widely used in management. The term "immunity" was first applied in biomedicine and was applied to the body's self-defense [5,6]. Wang Yihua, Lv Ping and others [7,8] were the first to apply the concept of immunity to the quality management practice of enterprises, and put forward the concept of tissue immunity, which is the ability of an organization to maintain the health of the body through some methods and measures. Subsequently, Lv Ping and Wang Yihua [9,10] divided tissue immunity into tissue specific immunity and tissue non-specific immunity, and considered the former as its core. Tissue specific immunity is also called acquired immunity, which consists of tissue defense, tissue surveillance and tissue memory [11]. Following the "tissue immunity", Shi Liping [12,13] and others successively proposed the concepts of "tissue quality immunity" and "tissue quality specific immunity", and believed that the latter is composed of tissue quality monitoring, tissue quality defense, and tissue quality memory. According to related theories of immunity, the ultimate goal of immunity is to maintain the health of the enterprise system. Therefore, this article will study the operating mechanism of the health of the acquired immune system of the quality improvement team of the manufacturing company, and fundamentally guarantee the health of the acquired immune system of the quality improvement team of the manufacturing company, in order to better optimize the quality of the company's own products or services, and thereby improve The competitiveness of manufacturing enterprises is to realize the priority and high-efficiency development goals of the manufacturing enterprises themselves.

2. Healthy Operating Mechanism of Acquired Immune System

2.1. Research Hypothesis

Following Lv Ping et al.'s related research on "tissue immunity", Shi Liping et al. also further developed the concept of "tissue quality immunity". Tissue quality immunity refers to tissue immunity that focuses on quality. According to the views of Lu Ping and Wang Yihua, tissue quality immunity can also be divided into tissue quality specific immunity and tissue quality non-specific immunity, with the former at its core. Tissue quality-specific immunity refers to an acquired immune behavior produced by companies constantly adapting to the market environment and solving their own quality problems. If the quality improvement team of a manufacturing company wants to finally achieve the quality improvement goal and enhance its internal strength, it should

first maintain the health of its own team's immune system. Therefore, this article will take tissue quality-specific immunity or acquired immunity as the starting point, and carry out research around the three elements of tissue quality-specific immunity, namely surveillance, defense and memory. Organizational quality monitoring refers to the monitoring of the internal and external environment of the enterprise at the quality level. In order to identify and eliminate threats to its own quality and safety factors, a good behavior of organizational quality monitoring can effectively protect the immune system of the team. Health; Organizational quality defense refers to a behavior that an organization resists and eliminates factors that threaten its own quality and safety, so as to ensure quality and safety, and effective defense helps maintain the health of the team's immune system; Organizational quality memory refers to storage and memory through A behavior of quality knowledge and information generated by monitoring and defense to promote quality decision-making within the enterprise. Through the organization of quality memory, it can effectively block external infringements and maintain the health of the body. Whether it is organizational quality monitoring, defense or memory, the ultimate goal is to maintain the quality and safety of the enterprise itself. The quality improvement team is a special form of organization [14], so for the quality improvement team of a manufacturing company, organizational quality monitoring, defense and memory can significantly improve the health of the team's immune system. From this, hypotheses can be made:

H1: Organizational quality monitoring, defense and memory have significantly improved the quality and improved the health of the team's immune system

Self-quality supervision can be said to be one of the forms of product quality supervision, and it is the basis for guaranteeing the quality of the enterprise's products [15]. In organizational quality monitoring, self-quality supervision is indispensable. It is responsible for multiple tasks, whether it is the strict control of product quality when the product leaves the factory or a series of product data collection, feedback, prevention, and supervision processes. Quality supervision behaviors all play a huge role. Only by doing a good job in internal quality supervision and inspection can companies benefit from it and win trust. Therefore, effective self-quality supervision can promote the improvement of enterprise product quality, better achieve quality monitoring effects, and thus help improve the health of the immune system of the organization's quality team. Based on this, the following assumptions can be made:

H2: Tissue quality monitoring plays an intermediary role in the positive impact of self-quality monitoring on the health of the immune system

Organizational learning is a better understanding and acquisition of knowledge and information needed by enterprises, and then the process of using and recreating them, improving corporate behavior, and enabling enterprises to maintain continuous competitive advantages [16-18]. Numerous studies have shown that organizational learning plays a key role in the process of companies gaining sustained competitive advantage. The importance of organizational learning is self-evident. If companies want to improve their competitiveness, they cannot do without effective organizational learning. This requires employees to have this organizational learning ability as much as possible. Organizational learning ability refers to the ability of organization members to take some measures to perfectly use and create organizational knowledge [19]. It can be embodied in various forms such as the ability of organization members to understand knowledge, mastery and application ability [20]. Having a good organizational learning ability can effectively solve various quality problems faced by the quality improvement team, thereby enhancing the quality defense ability of the quality improvement team, and further maintaining the health of the team's immune system. Based on this, the following assumptions can be made:

H3: Tissue quality defense plays a mediating role in the positive impact of organizational learning ability on immune system health

The concept of "organization forgotten" was proposed by Cohen and Levinthal. They found that in the process of learning new knowledge, part of the old knowledge will be forgotten over time, and this forgetting is uncontrolled and unintentional Forget [21]. Intentional and purposeful forgetting was proposed by Holan and Phillips, with the purpose of removing some discarded knowledge in response to environmental crises [22]. According to research in related literature, different scholars have different explanations for organizational forgetting. Shen Bo [23] believes that organizational forgetting is the process of abandoning old knowledge in order to strengthen the ability to absorb new knowledge; Zhang Xiaodi [24] believes that organizational forgetting It is the process of discarding the old and getting the new by the organization consciously catering to social changes; Wang Liping [25] and others believe that organization forgetting is the process of organizational self-renewal and targeted self-renewal. Therefore, in summary, organization forgetting is to abandon old knowledge and acquire new knowledge, and finally achieve the goal of enhancing the competitiveness of the enterprise. The organization forgets that through its continuous renewal and continuous absorption of new knowledge, it can improve the quality of the organization and further enhance the health of the team's immune system. From this, hypotheses can be made:

H4: Tissue quality memory plays a mediating role in the positive impact of tissue forgetting on immune system health

Any enterprise, team, department, etc. need to implement certain internal control methods for adjustment. As one of the important organizational systems, internal control can effectively enable the enterprise to achieve the established goals and obtain greater benefits [26]. Simply put, internal control is a general term that refers to a series of methods and measures taken by an enterprise to achieve its business goals and ensure the smooth progress of its business activities. Many scholars have conducted research on the impact of internal control on enterprises. Oliver [27] pointed out that internal control, as one of the organizational systems, affects the sustainable competitiveness of enterprises from multiple angles; Xie Manna [28] pointed out that internal control work directly relates to all enterprises. Whether this work can be run in accordance with the pre-set process plays a very important role in the development of the enterprise; Yang Qingxiang and others also proposed that sound, complete, and high-quality internal control can increase the value of the enterprise [29]. Shi Liping [30] also proposed that tissue quality acquired immunity is acquired and can be improved through internal control. Therefore, effective internal control not only plays a positive role in the survival and development of enterprises, but also contributes to the formation of organizational quality acquired immunity. This positive effect encourages companies to more effectively implement organizational quality monitoring, defense, and memory processes, thereby maintaining the health of the acquired immune system of the quality improvement team of manufacturing companies. Based on this, the following assumptions can be made:

H5: Internal control plays a positive role in the relationship between tissue quality monitoring, defense, memory and immune system health.

2.2. Theoretical Framework

Combining the above research hypothesis, according to the attributes, characteristics, location, function of each variable, and the relationship between the variables, the mechanism of action, the intensity of action, etc., this article discusses the health of the acquired immune system of the quality improvement team of the manufacturing company. Operation mechanism research can propose the following research model, as shown in Figure 1.

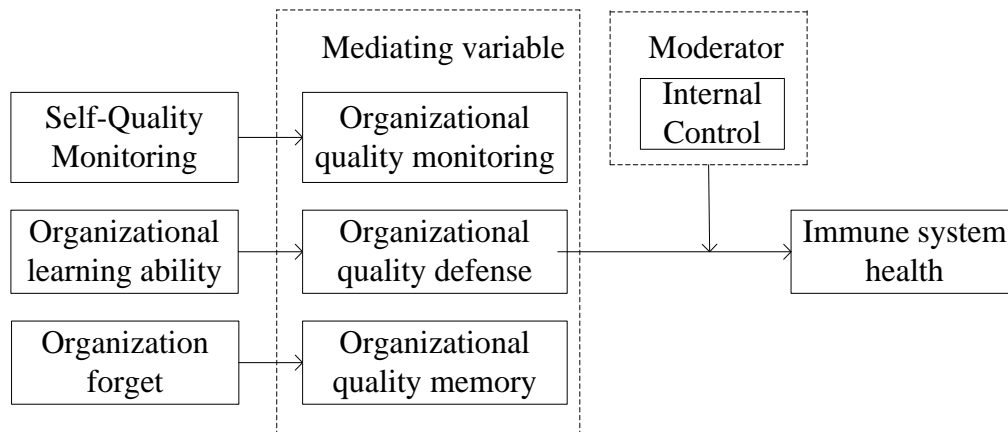


Figure 1: Theoretical conceptual model

3. Conclusion

This article starts from the perspective of biological immunity, combines the relevant concepts and mechanisms of biological immunity, takes the quality improvement team of the manufacturing company as the research object, and takes the acquired immunity as the starting point. The research is carried out around the three elements of tissue quality acquired immunity. It has realized the cross-fusion of management and biological theories, and has enriched the research results of the enterprise. The quality improvement team exists in every manufacturing enterprise and occupies an important position in the enterprise, so it is very important to maintain the health of the quality improvement team's immune system. This article focuses on the research on the operating mechanism of the acquired immune system health of the quality improvement team of manufacturing enterprises. The pre-dependent variables are selected as self-quality supervision, organizational learning ability and organizational forgetting; the mediating variables are organizational quality monitoring, defense and memory; the moderating variables are internal control; the result variable is the health of the immune system, and jointly build its theoretical model to study the operating mechanism. The study of this operating mechanism will help the quality improvement team of the manufacturing enterprise to improve the defects and deficiencies of its own acquired immune system, so as to more effectively maintain the health of the acquired immune system of the team, and then improve the quality of products or services of the manufacturing enterprise. The goal of high-quality development of the enterprise.

Acknowledgements

This research is funded by 2019 science research fund of department of education of Liaoning Province (JQW201915402). This research is also funded by 2018 Social Science Planning Fund of Liaoning Province (L18AGL009).

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