

La planeación de la auditoría en un sistema de gestión de calidad tomando como base la norma ISO 19011:2011

ISO 19001:2011 standard planning of the audit in a system of quality management on the basis of standard ISO 19011:2011

O planejamento da auditoria em um sistema de gerenciamento de qualidade baseado em ISO 19011: 2011

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Resumen

El objetivo de este estudio es realizar un análisis de la planeación de la auditoría tomando como base los puntos requeridos en la norma ISO 19011:2011. Esta investigación es de tipo cuantitativa, descriptiva-correlacional y, a su vez, transversal. Se diseñó un instrumento para medir la planeación de la auditoría de un sistema de gestión de calidad en el que se identificaron siete dimensiones de las cuales surgieron 37 ítemes y se realizó un análisis de confiabilidad obteniendo un valor de 0.962 de coeficiente alfa de cronbach. Como resultados se obtuvo que las dimensiones analizadas tienen un alto grado de aceptación en cuanto a la percepción de los miembros del sistema; por otra parte, existe una correlación significativa entre cada una de las dimensiones y la variable estudiada. Se concluye que el instrumento diseñado puede ser aplicado en distintas organizaciones para identificar la percepción de los miembros de un sistema de gestión de calidad sobre la planeación de la auditoría del mismo.

Palabras clave: auditoría, calidad, gestión, ISO 19011.

Abstract

The purpose of this is to perform an analysis of the planning of the audit on the basis of the points required in ISO 19011:2011. This research is quantitative, descriptive, correlational type and transverse turn. An instrument is designed to measure the planning of the audit of a system of quality management in which seven dimensions of which emerged 37 items were identified, an analysis of reliability obtaining a value of 0.962 Alpha coefficient of cronbach. As results obtained that the dimensions analyzed have a high degree of acceptance as regards the perception of the members of the system, on the other hand there is a significant correlation between each of the dimensions and the studied variable. It is concluded that the designed instrument can be applied in different organizations to identify the perception of the members of a system of quality management on the audit of it planning.

Keywords: auditing, quality, management, ISO 19011.

Resumo

O objetivo deste estudo é realizar uma análise do planejamento da auditoria com base nos pontos exigidos na ISO 19011: 2011. Esta pesquisa é quantitativa, descritiva-correlacional e, por sua vez, transversal. Um instrumento foi projetado para medir o planejamento da auditoria de um sistema de gerenciamento de qualidade no qual foram identificadas sete dimensões, das quais 37 itens surgiram e uma análise de confiabilidade foi realizada, obtendo um valor de 0,962 do coeficiente alfa coebach. Como resultados, obteve-se que as dimensões analisadas têm um alto grau de aceitação quanto à percepção dos membros do sistema; Por outro lado, existe uma correlação significativa entre cada uma das dimensões e a variável estudada. Conclui-se que o instrumento projetado pode ser aplicado em diferentes organizações para identificar a percepção dos membros de um sistema de gerenciamento de qualidade sobre o planejamento da auditoria do mesmo.

Palavras-chave: auditoria, qualidade, gerenciamento, ISO 19011.

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Introduction

The audit of a quality management system is important since it issues compliance reviews on the points that ISO standards consider within both public and private organizations, and in the case of ISO 19011: 2011 this can be applicable both for the revision of ISO 9001 and ISO 14000.

The objective of the present investigation is to analyze the points that refer to the planning of the audit of a quality management system and to design an instrument that allows an analysis of the perception of the workers on the aforementioned variable and, on the other Part, determine the degree of reliability of the instrument using the coefficient alpha of Cronbach and perform a correlation analysis between each of the dimensions, as well as between the dimensions and the variable object of study.

The methodology used for the present study is of a quantitative nature since it is intended to describe the perception of the members of a quality management system about the planning of the audit within it, in the same way it is a descriptive and correlational study since describes the percentages of the results obtained through the surveys applied and, in turn, analyzes the degree of correlation between the dimensions identified in the study; It is also cross-sectional since the application of the questionnaires was carried out in a single moment through a pilot test in which a reliability coefficient of Cronbach's alpha of 0.962 was identified.

The results show that most of the interviewees perceive in a positive way each one of the dimensions studied because the results show that the percentages oscillate above 80% as in agreement or very in agreement with the answers obtained; On the other hand, there is a high significant correlation between the dimensions analyzed and a very high correlation between the dimensions and the variable planning of the audit.

As conclusions, it can be mentioned that the developed instrument complies with the reliability to be applied in different organizations where it can allow an adequate decision making in the process of the audit planning; Likewise, it is intended that the present study be the beginning of an analysis in which the necessary instruments can be designed to measure the perception of an audit of a quality management system from its planning to its final feedback, taking into account consideration of the points indicated in ISO 19011: 2011.

Problem Statement

The quality audit, in accordance with ISO-19011-2011, is a systematic, independent and documented process to obtain evidence of the audit through registers, statements of facts or any other information and evaluate them objectively with the To determine the extent to which the audit criteria are met; therefore, through a methodical examination, it is determined whether the activities and results related to quality meet the previously established provisions and that they are actually carried out, in addition to verifying that they are adequate to achieve the proposed objectives. One of the most common classifications that is usually made of audits is the one that differentiates between internal and external.

In both types, the design of the quality audit planning is an important aspect that must be considered at the moment when it is decided to perform an audit of the Quality Management systems, in order to communicate the audit program to the parties. ; as well as to inform the relevant and informal aspects about the progress of the same.

Likewise, in planning, the objectives, scope and criteria for each audit must be defined; Likewise, the audit program must be coordinated and programmed and an adequate selection of the audit team must be made, which must have the necessary competence to carry out said process.

For this, the audit team must be provided with the necessary resources to ensure that the audits are carried out in accordance with the defined program and within the scheduled time, these activities must be recorded in an adequate manner to ensure their management and conservation.

The present study is convenient to determine that the audits to the Quality Management systems are carried out with the diligence and professional care established in accordance with the provisions of ISO 19011-2011, which regulates the performance of the quality management audits.

Compliance with the requirements established by ISO-9001 Quality Standard requires organizations to maintain a constant and timely supervision during the development of their administrative processes, forcing them to maintain their continuous improvement; Currently, organizations must seek total quality when talking about customer satisfaction and permanence in competitive markets.

The present study represents for the organizations a tool that will help to determine the importance of the planning of the audits to the systems of Quality Management, since these can be taken as a function of support to the organization as a whole, since its The objective is to evaluate the efficiency of the processes, minimize risks and promote continuous improvement, thereby achieving social responsibility in organizations.

Objective

Analizar la percepción de los miembros de un sistema de gestión de calidad sobre la planeación de la auditoría de calidad de acuerdo con la ISO 19011:2011 en su institución.

Specific objectives

Identify the dimensions contemplated by ISO 19011: 2011 on the planning of audits of a quality management system

Design and validate the reliability of an instrument that allows to measure the planning of the audit based on ISO 19011: 2011.

Analyze the existing correlation between the dimensions of the audit planning of a quality management system.

Literature review

The concept of audit

The audit is a critical examination that is carried out in order to evaluate the effectiveness and efficiency of a section, an organization, an entity, etc. The word audit comes from the Latin auditorius, and from this comes the word auditor, which refers to everyone who has the virtue of hearing (Méndez, Jaramillo and Serrano, 2006).

The term audit is synonymous with examining, verifying, investigating, consulting, reviewing, checking and obtaining evidence about information, records, processes, circuits, etc. Today, the word audit is related to various review or verification processes that, although all of them have in common the fact that they are linked to the company, can be differentiated according to their immediate economic purpose, as such. Thus, according to this criterion, we can establish a first large classification of the audit, differentiating between the economic audit and special audits (De la Peña, 2011).

In the case of the audit of a quality management system, the process involves the review of each of its processes in terms of the management that takes place within organizations, whether public or private.

Background of the audit

The audit exists from very remote times, although not as such, because there were no complex economic relationships with accounting systems. From medieval times to the Industrial Revolution, the development of the audit was closely linked to the purely practical activity and from the craftsmanship of the production the auditor limited himself to making simple reviews of accounts for purchase and sale, collections and payments and other similar functions with the aim of discovering fraudulent operations, as well as determining if the people who held positions of fiscal responsibility in government and commerce acted and reported honestly, that it was done with a thorough study of each of the existing evidences . This stage was characterized by a slow development and evolution of the audit (Murillo, 2011).

As Franklin (2000) writes: "In 1949, Billy E. Goetz declares the concept of administrative audit, which is responsible for discovering and correcting clerical errors. Six years later, in 1955, Harold Koontz and Ciryll O'Donnell, also in their Principles of Administration, propose to the self-audit, as a technique of control of the total performance, which would be destined to "evaluate the position of the company to determine where you are, where you are going with the programs present, what your objectives should be, and if revised plans are needed to achieve these objectives. "

As mentioned above, the audit is an important process, not to mention that its applicability exists from the existing theories of the administration in which the administrative processes are shown, where the administrative audit function is where the audit process is immersed of any type that allows a thorough review to determine the necessary controls and verification of compliance with the objectives as planned.

Quality audit

It is a systematic, independent and documented process to obtain evidence and evaluate it objectively in order to determine the extent to which the criteria are met (Méndez et al., 2006).

The audit from its beginnings, in the old age, was oriented to a methodical and rigorous review for administrative accounting purposes, subsequently evolving to other areas, such as operational and quality (Yáñez and Yáñez, 2012). On the other hand, Gryna, Chua and Defeo (2008) define the audit as an independent review carried out to compare some aspects of quality performance with a standard for that performance, highlighting in this notion the essence of the audit of quality and the comparison of obtained (verifiable) results with the established standards.

The quality audit must not become a simple routine inspection and its development not only involves the person or audit team, but also the auditees themselves. The success and effectiveness of a quality audit depend on the cooperation of all parties involved (Fundación ECA global, 2006).

Therefore, the audit process in a quality management system is a merely important part, not only in terms of execution, but also in the recommendations for improvement that are detected for the improvement of organizational processes and, Therefore, the improvement of the organizations regarding the homogenization of the processes according to what is analyzed in them.

Escobar, Moreno and Cuevas (2016) developed interviews (to national and international experts) and documentary reviews from which allowed to establish a group of limitations in the current management of integrated audits, as a tool for evaluating the SIG expressed in the following problems :

- Deficiencies in the control and monitoring of the results of the audit process evidenced by a high index of repetitiveness in the detected non-conformities.

- The indicators provided in the internal audit procedure for the development of the process do not express from a quality perspective the information necessary for their feedback and improvement.
- No availability of ICT tools that enable the work of the auditors and the monitoring and control actions by the organization towards the results of the audit process.
- Difficulties in the planning, execution and monitoring of the audit, in which the treatment of the risks of the process is not conceived; These define a dimension of danger that directly affects their quality.

ISO standards

The process represents a particular system, which operates within a general system, whose activities interact to obtain a result of greater value than at the beginning. It is important to identify them, measuring them and controlling them to ensure good performance (process management). Customer satisfaction will depend a lot on how each of the processes are developed. When starting the implementation of an ISO 9001 SGC, organizations must restructure towards a process approach and these must be properly managed, measuring their performance through key indicators, in order to take the appropriate corrective actions and the consequent improvement of the and the entire company (Válencia and Párraga, 2013).

Among the standards published by ISO, the best known internationally is the ISO 9000 family; these norms focus on the processes, independently of the specific product or service to which the organization is dedicated for the implementation of a quality model in an organization (Méndez et al., 2006).

These quality systems must be evaluated through quality audits, which verify that they are complying with what is established in the ISO standard, since one of the main principles is the continuous improvement that is carried out in each and every one of them. the activities

that are developed in the organizations, either by providing a service or in the elaboration of a product, that is, in any type of organization.

Currently, organizations are faced with the imminent need to respond and adapt to a heterogeneous, dynamic and unpredictable environment, in which local and global demands converge to higher levels of quality, which is why they must work more and more on the improvement of its products and processes to guarantee the satisfaction of its customers and be competitive.

Therefore, it is evident the increase in the use of tools for the continuous improvement of Quality Management Systems (QMS), based mainly on ISO 9000 standards, as these are the most widely accepted worldwide (Yáñez and Yáñez, 2012).

Cuatrecasa (2010) defines it as those that are made in the company itself, at the request of senior management. It will be carried out with qualified personnel who will act as an auditor in order to carry out a self-assessment of the company itself. With regard to external audits, also called second and third party audits, firstly it should be noted that the second part are those that are aimed at the evaluation carried out by independent technical staff outside the organization, which is responsible for the review of the processes and act with their procedures and methodology.

ISO 19011: 2011

This International Standard provides guidance on the audit of management systems, including the principles of auditing, the management of an audit program and the performance of audits of management systems, as well as guidance on the assessment of the competence of individuals who participate in the audit process, including the person who manages the audit program, the auditors and the audit teams. It is applicable to all organizations that need to perform internal or external audits of management systems, or manage an audit program. The application of this International Standard to other types of audits is possible, provided that special attention is paid to the specific competence required (ISO Central Secretariat, 2012).

The audit is characterized by depending on several principles. These principles should help make the audit an effective and reliable tool in support of management policies and controls, providing information on which an organization can act to improve its performance. Adherence to these principles is a prerequisite for providing audit conclusions that are relevant and sufficient and to allow auditors, working independently from each other, to reach similar conclusions in similar circumstances.

a) Integrity: the foundation of professionalism. Auditors and the people who manage an audit program should:

— Perform your work with honesty, diligence and responsibility.

- Observe and comply with all applicable legal requirements.

- Demonstrate their competence in carrying out their work.

- Perform their work in an impartial manner, that is, remain impartial and unbiased in all their actions.

- Be sensitive to any influence that may be exercised on your judgment while conducting an audit.

b) Fair presentation: the obligation to report truthfully and accurately. The findings, conclusions and reports of the audit should accurately and accurately reflect the audit activities. The significant obstacles encountered during the audit and the divergent unresolved opinions between the audit team and the auditee should be reported. The communication should be truthful, accurate, objective, timely, clear and complete.

c) Due to professional care: the application of diligence and judgment when auditing. Auditors should proceed with due care, in accordance with the importance of the task they perform and the trust placed in them by the audit client and by other interested parties. An important factor in performing your work with due professional care is having the ability to make reasoned judgments in all situations of the audit.

d) Confidentiality: information security. Auditors should proceed with discretion in the use and protection of information acquired in the course of their tasks. The audit information should not be used inappropriately for the personal benefit of the auditor or the client of the audit, or in a way that harms the legitimate interest of the auditee. This concept includes the appropriate treatment of sensitive or confidential information.

e) Independence: the basis for the impartiality of the audit and the objectivity of the conclusions of the audit. Auditors should be independent of the activity being audited whenever possible, and in all cases should act in a manner free of bias and conflict of interest. For internal audits, auditors should be independent of the operational managers of the function being audited. Auditors should maintain objectivity throughout the audit process to ensure that the findings and conclusions of the audit will be based only on the audit evidence. For small organizations, it may not be possible for internal auditors to be completely independent of the activity being audited, but every effort should be made to eliminate bias and promote objectivity.

f) Evidence-based approach: the rational method to reach reliable and reproducible audit conclusions in a systematic audit process. The evidence of the audit should be verifiable. In general it will be based on samples of the available information, since an audit is carried out during a limited period of time and with finite resources. Appropriate use of sampling should be applied, as it is closely related to the confidence that can be placed in the conclusions of the audit (Secretaría Central de ISO, 2012).

Methodology

Research focus

Quantitative research adopts a systematic, objective and rigorous strategy to generate and refine knowledge. In this design, deductive reasoning and generalization are used initially (Sousa, Driessnack and Costa, 2007).

The design of this research is quantitative, since it aims to analyze the data on the perception of workers in relation to the planning of audits of a quality management system of an educational institution.

Kind of investigation

The present investigation is non-experimental, descriptive-correlational and, in turn, transversal since the variables are not manipulated and aims to describe the data according to the workers' perception of a variable by compiling them at a single moment in time. of the research process.

In a non-experimental study no situation is generated, but existing situations are observed, not intentionally provoked in the research by the person who carries it out. In non-experimental research, independent variables occur and it is not possible to manipulate them, you do not have direct control over these variables and you can not influence them, because they have already happened, as well as their effects (Hernández, Fernández and Baptista, 2010).

The descriptive investigations are those that try to say what reality is like. The scientific description is very important because it constitutes the first systematic approach to the knowledge of reality (Mejía, 2005).

In transectional or cross-sectional studies, the unit of analysis is observed at a single point in time. They are used in investigations with exploratory or descriptive objectives for the analysis of the interaction of the variables in a specific time (Avila B., 2006).

Correlational research uses a numerical index called correlation coefficient as a measure of the strength of such a relationship. In almost all correlational studies, the value of said index is reported (Salkind, 1998).

Pilot test

This phase consists of administering the instrument to a small sample to prove its relevance and effectiveness (including instructions), as well as the conditions of the application and the procedures involved. From this test the initial reliability and validity of the instrument are calculated (Hernández, Fernández and Baptista, 2010).

In order to carry out this research, a pilot test was carried out on 40 members of the audit team of the integral quality system of the institution under study.

Measuring instrument

According to the writers, every instrument used for data collection must meet at least two conditions: reliability and validity. Reliability (or reliability) is a basic requirement, insofar as it ensures the accuracy and veracity of the data. In order for an instrument to be reliable, it must truthfully measure the same participant subject at different times and produce the same results. Bell (2002) states that "reliability is the degree to which a test or procedure produces similar results in constant conditions on all occasions" (Niño, 2011).

The measuring instrument was designed taking as reference the points 5.2 and 5.3 mentioned in the International Standard ISO 19011: 2011, from which the aspect of each point was identified and from there to develop the dimensions of the variable object of study remaining from the following way: program objectives with 4 items, roles and responsibilities for management with 9 items, management competence with 7 items, scope

of the program with 4 items, program risks with 5 items, program procedures with 4 items and, finally , resources of the program with 4 items.

Reliability of the instrument

The reliability of the instrument was determined by the cronbach alpha coefficient created by J.L. Cronbach in which it is mentioned that goes between the value 0 and 1 being reliable from 0.80 and as shown in the following table the reliability of the present obtained a value of 0.962 being this a reliable instrument.

Tabla 1. Estadísticos de fiabilidad.

Alfa de Cronbach	N de elementos
0.962	37

Fuente: elaboración propia.

Data collection technique

The data collection technique was developed by applying the surveys to the staff of the institution under study in a direct and personal way in each of their work areas considering that the workers belonged to the management system of the same.

Data analysis technique

To process the information after the data collection, each of the surveys was captured in the statistical program SPSS version 22 to carry out the analysis of the frequencies for each of the items, subsequently grouped by each of the dimensions and, Finally, the correlation between the dimensions studied was analyzed taking into account the Pearson correlation coefficient.

Operationalization of variable and dimensions

The variables are concepts adopted by man in a conscious way for a specific purpose, so each science has its own set of concepts, which allow communication between researchers belonging to the same scientific community and are defined and specified so that they can be observed and measured (Hernandez and Coello, 2008).

By dimension we understand a significant component of a variable that has relative autonomy. We refer to components because we are considering the variable as a complex aggregate of elements that give us a unique, synthetic product (Sabino, 1992).

Tabla 2. Planeación de la Auditoría con base en los puntos 5.2. y 5.3 de la ISO 19011:2011.

Operacionalización de variables Planeación de la auditoría				
Aspecto	Dimensión	Relación con puntos de la norma ISO 19011:2011	Definición	Ítem
Planeación de la auditoría	Objetivos del programa	5.2	La alta gerencia debería asegurar que se hayan establecido los objetivos del programa de auditoría de manera que tal sirvan para dirigir la planeación de las auditorías y para conducirlas y debería asegurar que el programa de auditoría esta efectivamente implementado.	1.- Los objetivos de la auditoría corresponden a la razón de ser de la organización. 2.- Los objetivos de la auditoría consideran las necesidades y expectativas de las partes involucradas. 3.- Los objetivos de la auditoría consideran los riesgos para el auditado. 4.- Los objetivos de la auditoría consideran los resultados de auditorías previas.
	Establecimiento del programa	5.3		
	Roles y responsabilidades para la gestión	5.3.1	La persona que gestiona el programa de auditoría debería: establecer el alcance del programa de auditoría, identificar y evaluar los riesgos, establecer responsabilidades de auditoría, establecer procedimientos para el programa, determinar los recursos necesarios, asegurar la implementación del programa de auditoría incluyendo el establecimiento de objetivos, alcance, criterios de auditoría, seleccionar y evaluar al equipo auditor, así como asegurar el manejo y mantenimiento de los registros de auditoría; monitorear, revisar y monitorear el programa de auditoría; informar a la alta gerencia acerca del contenido del programa y solicitar su aprobación.	5.- El alcance del programa de la auditoría está bien definido. 6.- El responsable del programa de auditoría tiene identificados los riesgos de la misma. 7.- El auditor líder establece claramente las responsabilidades de la auditoría. 8.- Se tienen definidos claramente los procedimientos para llevar a cabo el programa de auditoría. 9.- Se tienen identificados los recursos necesarios para la realización de la auditoría. 10.- Los criterios de la auditoría son claros y homogéneos. 11.- Se cuenta con registros que faciliten el seguimiento de la realización de la auditoría. 12.- El auditor líder realiza una evaluación de acuerdo a las necesidades del sistema sobre el equipo auditor. 13.- El auditor líder informa a la alta dirección sobre el programa de auditoría.

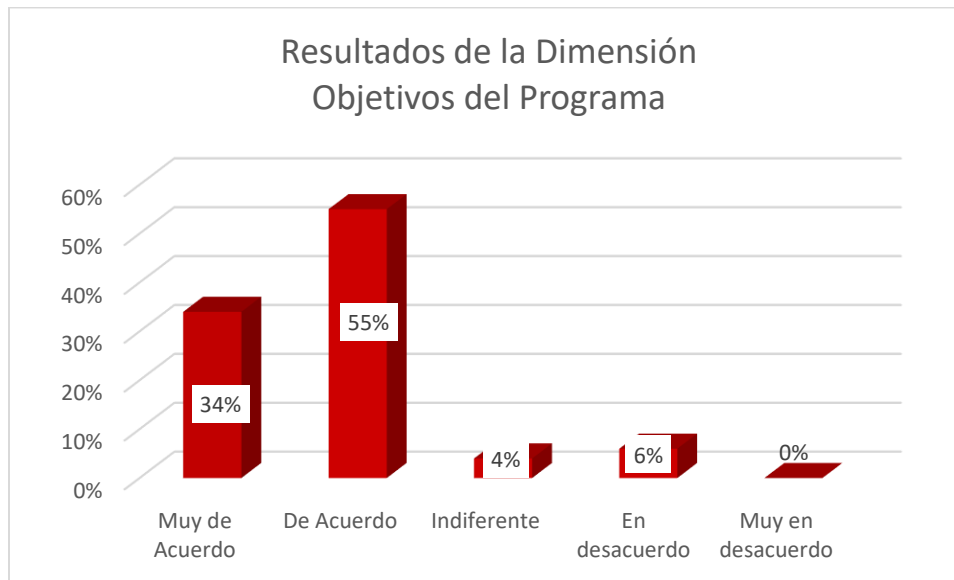
Competencia de gestión	5.3.2	La persona que gestiona el programa de auditoría debería tener la competencia necesaria para gestionar dicho programa y los riesgos asociados de manera efectiva y eficiente, así como el conocimiento y habilidades en las siguientes áreas: principios, procedimientos y métodos de auditoría; normas de sistemas de gestión y documentos de referencia; actividades, productos y procesos del auditado; requisitos legales y aplicables a las actividades y productos; clientes proveedores y partes interesadas del auditado. Involucrarse en actividades de desarrollo profesional para mantener el conocimiento y habilidades necesarias para gestionar el programa.	14.- La persona que gestiona el programa de auditoría tiene la competencia necesaria para desempeñar sus funciones. 15.- La persona que gestiona el programa de auditoría cuenta con el conocimiento y habilidades para el desarrollo del mismo. 16.- La persona que gestiona el programa de auditoría conoce los procedimientos necesarios para realizar la auditoría. 17.- La persona que gestiona el programa de auditoría muestra conocimiento sobre las normas de calidad. 18.- La persona que gestiona el programa de auditoría muestra conocimiento sobre los procesos que se realizan dentro de la organización. 19.- La persona que gestiona el programa de auditoría tienen identificados claramente los involucrados en la misma. 20.- La persona que gestiona el programa de auditoría realiza actividades de desarrollo profesional.
Alcance del programa	5.3.3	La persona que gestiona el programa de auditoría debería determinar el alcance de dicho programa, el cual puede variar dependiendo el tamaño y naturaleza del auditado, así como de la naturaleza, funcionalidad, complejidad y nivel de madurez y temas significativos para el sistema de gestión a ser auditado.	21.- Se identifica de manera clara el alcance de la auditoría de acuerdo a la naturaleza del mismo. 22.- Se tiene identificada la funcionalidad del programa de auditoría. 23.- Se tiene identificada la complejidad del programa de auditoría. 24.- Dentro del alcance se identifica la madurez del sistema en relación con la calidad.
Riesgos del programa	5.3.4	Existen muchos riesgos diferentes asociados con el establecimiento, implementación, monitoreo, revisión y mejora de un programa de auditoría, que pueden afectar el logro de sus objetivos. La persona que gestiona el programa debería considerar estos riesgos para su desarrollo.	25.- Se tienen identificados los riesgos en el establecimiento del programa de auditoría. 26.- Se tienen identificados los riesgos en la implementación del programa de auditoría. 27.- Se identifican los riesgos sobre el monitoreo del programa de auditoría. 28.- Se identifican los riesgos de la revisión del programa de auditoría. 29.- Se presentan propuestas de mejora para la realización del programa de auditoría.
Procedimientos del programa	5.3.5	La persona que gestiona el programa de auditoría debería establecer uno o más procedimientos que den tratamiento a lo siguiente, según sea aplicable.	30.- La persona que gestiona el programa de auditoría tiene procedimientos establecidos para el desarrollo del mismo. 31.- Existen procedimientos para respaldar de manera segura y confiable la información obtenida. 32.- Existe un procedimiento que asegure la competencia de los auditores y los líderes de equipo. 33.- Existen procedimientos para monitorear y revisar el desempeño de la auditoría.
Recursos del programa	5.3.6	Al identificar los recursos necesarios para el programa de auditoría, la persona que gestiona dicho programa debería considerar, recursos financieros, métodos, auditores, alcance, riesgos, tiempo y costos así como disponibilidad de información y tecnologías de comunicación.	34.- Se identifican los recursos financieros necesarios para realizar el programa de auditoría. 35.- Se cuenta con disponibilidad de los auditores para la realización del programa. 36.- Se identifican los tiempos y costos del desarrollo del programa. 37.- Se dispone de información necesaria para realizar la auditoría.

Fuente: elaboración propia.

Results

This section shows the results obtained after the data collection and the statistical analysis of the frequencies of each of the items of the measurement instrument.

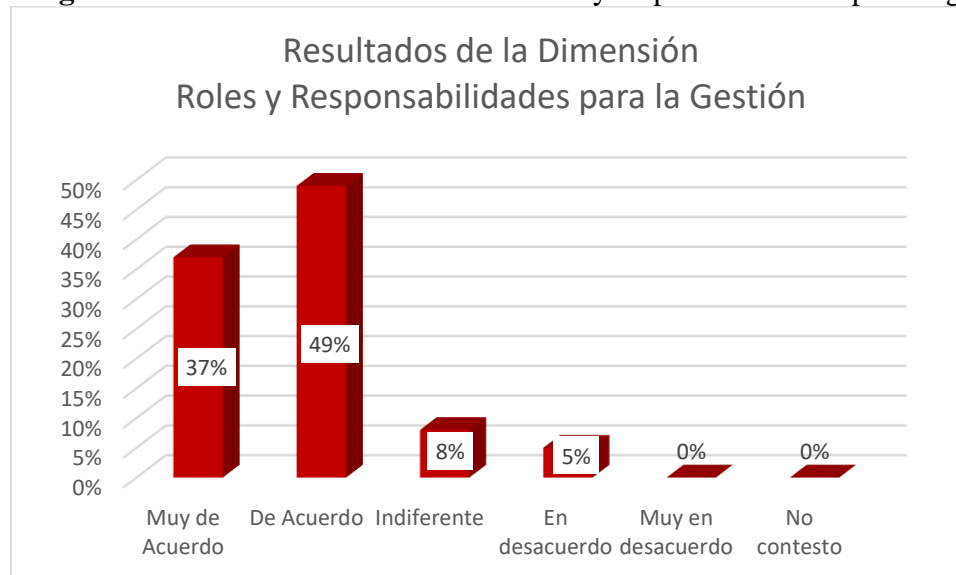
Figura 1. Dimensión objetivos del programa.



Fuente: elaboración propia.

Regarding the dimension of objectives of the program, the perception of the workers of the quality system shows that 55% agree and 34% strongly agree that the objectives of the program are related to the organization's reason for being and that they consider the needs and expectations of the parties involved; on the other hand, the same percentage is in favor of the risks are foreseen from the establishment of the objectives of the audit considering the results of previous audits, of the aforementioned only 4% perceive it in an indifferent way and 6% disagree. With the points analyzed, this leads to the organization under study to ensure that the objectives of the program are established in an appropriate manner and allow to comply with the performance of a good audit.

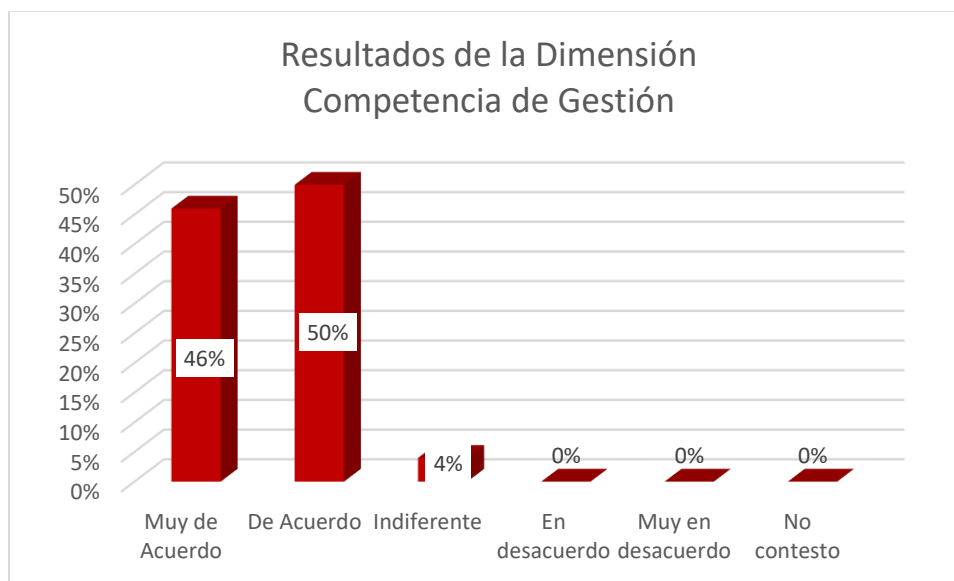
Figura 2. Resultados de la dimensión roles y responsabilidades para la gestión.



Fuente: elaboración propia.

On the results of the roles and responsibilities dimension for management when referring to the person who manages the audit program in this case the lead auditor the results show that 49% agree and 37% strongly agree that the scope of the The program of the audit is well defined, the person responsible for the program has well identified the risks of the audit, where the responsible person establishes the roles of each one of the participants in the audit as well as the procedures for their effective realization, counting on the resources necessary for the operation, establishing clear and homogeneous criteria, registering each of the aspects to be reviewed in the follow-up of the processes, in the same way that an evaluation is made to the audit team, informing the senior management about the results of the audit.

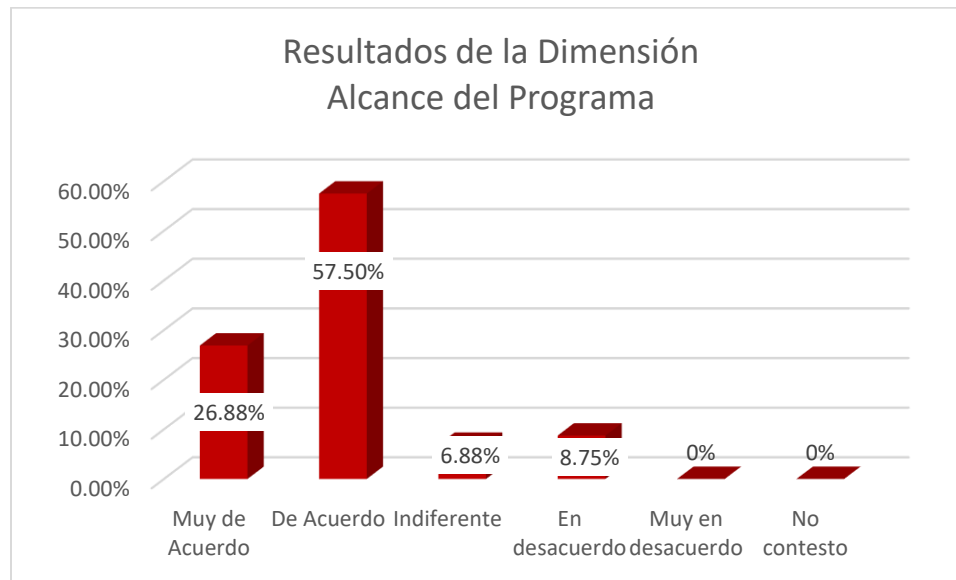
Figura 3. Resultados de la dimensión competencia de gestión.



Fuente: elaboración propia.

Continuing with the analysis of results and taking as a reference the graph corresponding to the management competence dimension 50% and 46% agree and strongly agree that the person who manages the audit program has the knowledge, skills and competencies to develop their activities and, in the same way, they know the procedures of the quality audit process, as well as the quality standards audited, not to mention that they have also identified those involved in the system and, therefore, in the process of the audit; on the other hand, only 4% is in a position of indifference in the previously analyzed.

Figura 4. Resultados de la dimensión alcance del programa.

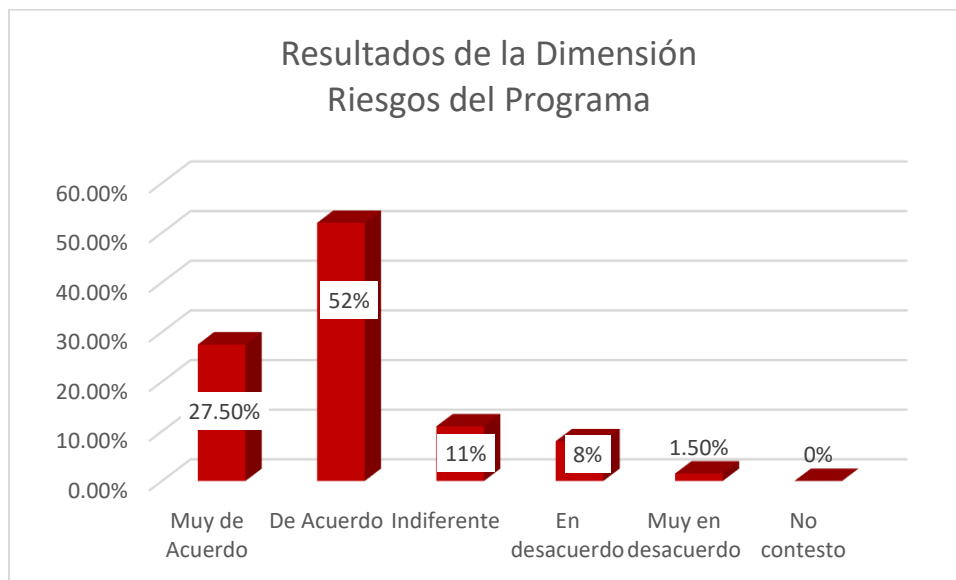


Fuente: elaboración propia.

Regarding the scope dimension of the program, workers perceive it positively since the results show that 57.50% agree and 26.88% strongly agree that the scope of the audit is well defined within the organization, as well as identifying the functionality and complexity of it, not to mention that within the scope the maturity of the system is identified in relation to quality and only 8.75% disagrees, leaving 6.88% in a position of indifference with the aforementioned and with the significant issues for the management system to be audited.

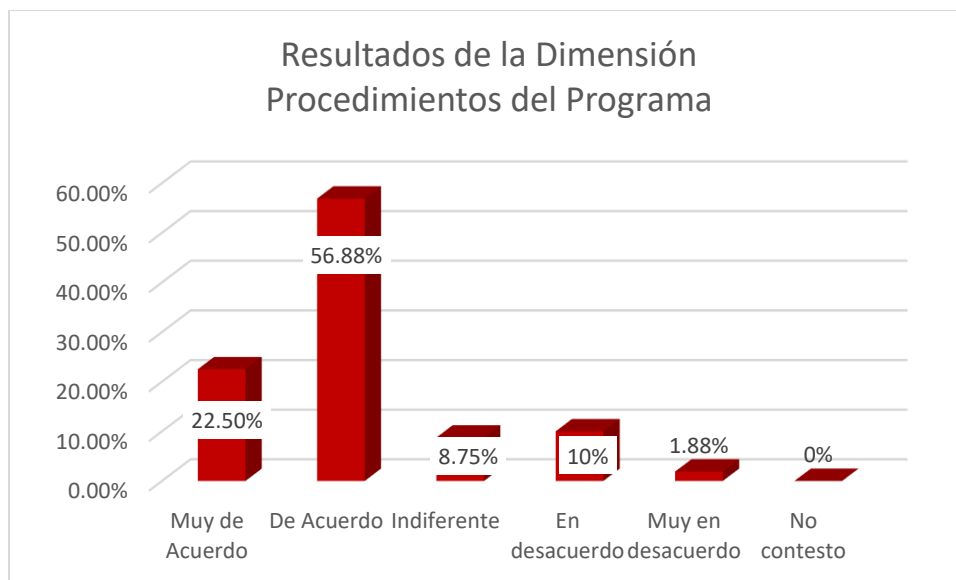
As can be seen in graph No. 5 regarding the program's risk dimension when referring to the risks that may exist within the process of conducting the audit, the results show that workers, like the previous dimensions, perceive positive aspects related to the present dimension since 52% and 27.5% agree and strongly agree that the risks of the audit are well identified in relation to the establishment, implementation, monitoring and review of the audit, On the other hand, improvement proposals are presented for the audit program obtained from the feedback of the same, it should be mentioned that in this dimension 11% is shown in an indifferent position, 8% in disagreement and only 1.5% in strongly disagreement.

Figura 5. Resultados de la dimensión riesgos del programa.



Fuente: elaboración propia.

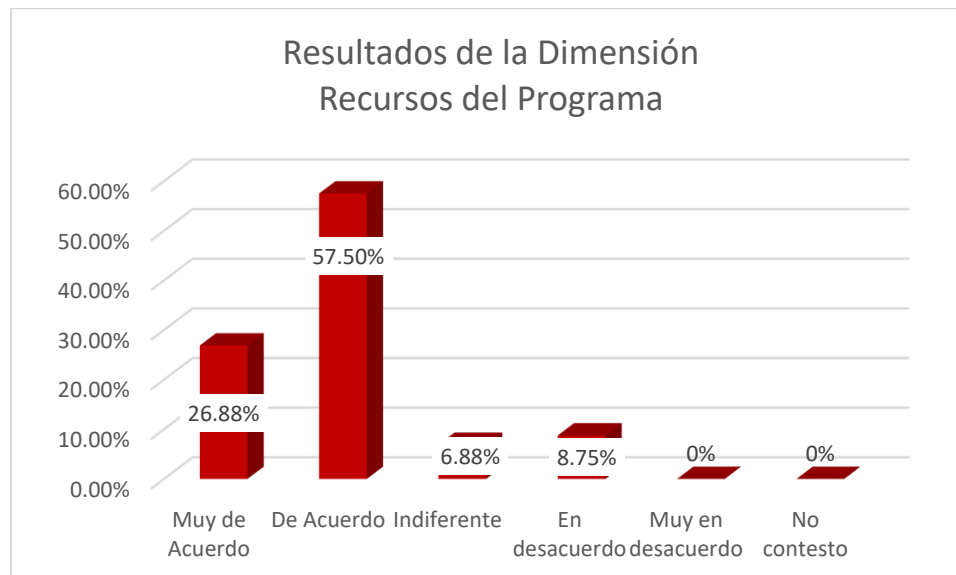
Figura 6. Resultados de la dimensión procedimientos del programa.



Fuente: elaboración propia.

In relation to the results obtained from the program procedures dimension, it can be seen that the percentages are inclined in the scale by agreement and very much agreeing, obtaining 56.88% and 22.50%, being these positive for the organization under study and making reference in Regarding the items that workers perceive that there is an audit program that has well developed procedures, where information is backed up in a safe and reliable manner, there is also a procedure that ensures auditors' competence and adequate monitoring and evaluation. review of the performance of the audit; It should be mentioned that in this dimension 8.75% is indifferent, 10% disagree and 1.88% strongly disagree.

Figura 7. Resultados de la dimensión recursos del programa.

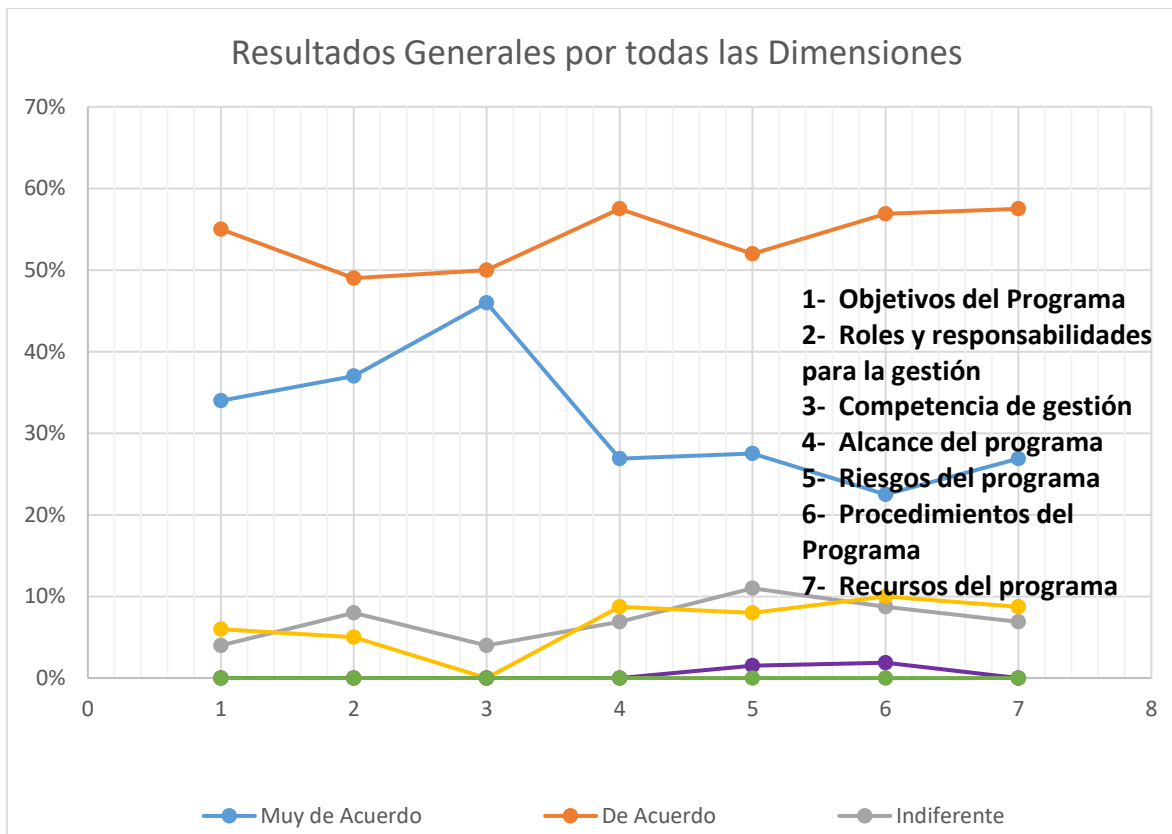


Fuente: elaboración propia.

Regarding the last dimension called program resources, the workers agree that 57.5% and 26.88% strongly agree that financial resources are well identified within the management system; the auditors are available to carry out the audits; the times and costs of program development are identified and, finally, the necessary information is available to perform the audit, in this dimension 6.88% is indifferent and 8.75% disagrees with the aforementioned.

General graph

Figura 8. Resultados generales de las dimensiones de la planeación de la auditoría de calidad.



Fuente: elaboración propia.

Regarding the general results, it can be seen that in general of the seven dimensions of the audit planning variable that are program objectives, roles and responsibilities for management, management competence, program scope, program risks, program procedures and resources of the program, most of the interviewees perceive as agreed, since as shown in figure 8 between 50% and 60% of the population answered according to this range; also, between 20% and 50% answered that they are very in agreement with the variable object of study; On the other hand, it is observed that only between 0% and 10% disagree and strongly disagree with it.

Tabla 3. Correlaciones Pearson.

		Objetivos del programa	Roles y responsabilidades para la gestión	Competencia de la gestión	Alcance del programa	Riesgos del programa	Procedimientos del programa	Recursos del programa	Planeación de la auditoría
Objetivos del programa	Correlación de Pearson	1	.653**	.527**	.469**	.602**	.371*	.462**	.688**
	Sig. (bilateral)		0	0	0.002	0	0.018	0.003	0
Roles y responsabilidades para la gestión	Correlación de Pearson		1	.785**	.660**	.733**	.651**	.709**	.892**
	Sig. (bilateral)			0	0	0	0	0	0
Competencia de la gestión	Correlación de Pearson			1	.617**	.724**	.599**	.676**	.844**
	Sig. (bilateral)				0	0	0	0	0
Alcance del programa	Correlación de Pearson				1	.579**	.367*	.605**	.751**
	Sig. (bilateral)					0	0.02	0	0
Riesgos del programa	Correlación de Pearson					1	.680**	.708**	.885**
	Sig. (bilateral)						0	0	0
Procedimientos del programa	Correlación de Pearson						1	.733**	.785**
	Sig. (bilateral)							0	0
Recursos del programa	Correlación de Pearson							1	.874**
	Sig. (bilateral)								0
Planeación de la auditoría	Correlación de Pearson								1
	Sig. (bilateral)								

Fuente: elaboración propia.

** . La correlación es significativa al nivel 0,01 (bilateral).

* . La correlación es significativa al nivel 0,05 (bilateral).

The Pearson correlation coefficient is the most commonly used coefficient in the social sciences. It is determined with the quotient between the standard deviation and the value determined in the arithmetic measure. In this type of analysis the use of ordinal or continuous variables is presumed and that their distribution is close to the normal or bell curve. The value closest to the unit; it will be reflecting a greater degree of correlation. Factor one would be interpreted as 1 = 100% correlation (Jiménez, 2016).

Tabla 4. Interpretación del coeficiente de correlación.

Coefficiente	Interpretación
$r = 1$	Correlación perfecta
$0.80 < r < 1$	Muy Alta
$0.60 < r < 0.80$	Alta
$0.40 < r < 0.60$	Moderada
$0.20 < r < 0.40$	Baja
$0 < r < 0.20$	Muy baja
$R = 0$	Nula

Fuente: Jiménez (2016).

Regarding the results obtained from the Pearson correlation between the dimensions of the variable planning of the audit, the results show the following.

The objective dimension of the program is correlated with a 0.653 with the dimension of roles and responsibilities for management where the correlation is significant at the 0.01 bilateral level, this being a high correlation according to the interpretation table of the Pearson correlation in the same way The dimension in analysis is correlated in a 0.602 with the risk dimension of the program.

Regarding the roles and responsibilities dimension for management, it can be observed that there are three high correlations with the competency dimension of management with a correlation degree of 0.785, program risks with 0.733 and program resources with a correlation 0.709. that with the other dimensions there is also a high degree, since there is 0.660 with the scope of the program and 0.651 with the program procedures dimension.

Continuing with the analysis of the correlations, the competence dimension of the management obtains its highest correlation with the program's risk dimension with a correlation value of 0.724, while with the scope and resource dimensions of the program it obtains a 0.617 and a 0.676 degree which is still high according to Table 4 and with the

program procedures dimension obtains a moderate degree of correlation with a value of 0.599.

On the other hand, the scope dimension of the program, the most significant correlation is with the resources dimension of the program with a value of 0.605 considering this as high, while there is a moderate correlation with the risk dimension of the program with a 0.579 and a low correlation with the program procedures dimension with 0.367.

The risk dimension of the program obtains two high correlations as shown in the previous table with the program's program dimensions and program resources with a correlation degree of 0.680 and 0.708, respectively, in the order mentioned.

The procedural dimension of the program obtains, like the previous one, a high correlation with the resources dimension of the program with a degree of correlation of 0.733.

In general, the correlations shown in the table obtain a high interpretation regarding the correlation analysis between the dimensions, not to mention that with regard to the variable object of study that is the planning of the audit, the results show that there is a very high correlation of the variable with the dimensions of roles and responsibilities for management, management competence, program risks and program resources since the correlation value ranges from 0.844 to 0.892 while with the remaining dimensions at refer to program objectives, program scope and program procedures, the correlation is high with values between 0.688 and 0.785 of degree of correlation.

Conclusions

Regarding the conclusions obtained from the present investigation, starting in the order in which the objectives of the same are shown, after a documentary analysis on the points indicated by ISO 19011: 2011, it is determined that the dimensions for planning The audits of a quality management system are the following: program objectives, roles and responsibilities for management, management competence, program scope, program risks, program procedures and program resources. These dimensions were operationalized to determine, after their identification, the items corresponding to each one of them. The total for the variable planning of the audit was 37, and they were applied by means of a pilot test to the personnel of auditors of the system of quality management object of study measuring the perception of the members on the dimensions before mentioned in a scale of type Likert, to then process the information in the SPSS statistical program and carry out the reliability analysis using the Cronbach alpha coefficient.

The reliability value turned out to be positive, that is to say, that the data provided by the analysis are reliable data, which allows us to conclude that the instrument designed is a reliable tool that will allow the development of future research on the topic dealt with within the systems of quality management of organizations and, because it is an instrument designed based on an international standard, it can be applied in both the public and private sectors.

Regarding the third objective proposed to analyze the correlation of the dimensions of the studied variable, it can be concluded that, in general, all the dimensions have a correlation of high character according to the results that are shown in the correlation table, without to fail to mention that each of the dimensions correlates to a very high degree with the variable studied. It is worth mentioning that for each study, based on the results of the surveys applied, these correlations, as well as the reliability coefficient, can vary because organizations live different moments in their quality management process.

Regarding the objective of knowing the perception of the members of the quality management system about the planning of the audit of their system, the results show that the majority of workers perceive the variable and dimensions analyzed positively; This leads us to conclude that in the institution under study, the coordination of the quality management system in this case, when referring to the quality audit, comply with the requirements of the ISO 19011: 2011 standard, as mentioned previously each of the questions developed for the analysis was taken with reference to it.

Finally, it is concluded that the present investigation is the first part of a model that contemplates to design more instruments that allow closing the cycle of the audit of a quality management system that can be used to identify in which of the points indicated by the norm analyzed system members perceive, either positively or negatively; this will allow top management to identify the strengths and weaknesses of its audit team in order to establish improvement mechanisms in the cases that are required.

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