Contents lists available at GrowingScience

Journal of Project Management

homepage: www.GrowingScience.com

The influence of organizational culture on project portfolio management practices within the healthcare sector

Oswin Newton Kakumanua*

^aStudent at Department of Marketing and Management, Southern Institute of Technology, Invercargill, New Zealand

ABSTRACT

Article history:
Received July 22, 2024
Received in revised format
December 22, 2024
Accepted January 15 2025
Available online
January 15 2025

Keywords:
Organizational culture
Project portfolio management
practices
Portfolio management
Program management
Project management
Healthcare

This study examines the impact of organizational culture on the effectiveness of Project Portfolio Management (PPM) practices. Organizational culture influences employee behavior and their way of working by providing a conducive work environment. Thus, managers are able to delegate better while ensuring a balanced workload, collaborative team efforts, and prudent resource allocation to achieve desired project portfolio deliverables. By shaping practices and values, a supportive culture enables efficient task performance, effective delegation, teamwork, and resource allocation toward project goals. Conducted with 35 individuals in a healthcare organization's data and digital unit in New Zealand, the study used convenience sampling and email surveys. Regression analysis was performed in IBM SPSS Statistics to test the research hypothesis. Findings suggest that supportive organizational culture significantly enhances PPM execution and informs policy-making for improved PPM practices. This study facilitates directors, strategists, and managers in taking steps to form a culture that ensures effective execution of PPM practices to achieve better results. Future research could explore this topic with larger samples and alternative methodologies to deepen insights into culture's role in PPM effectiveness.

© 2025 by the authors; licensee Growing Science, Canada

1. Introduction

This study examines the influence of organizational culture on project portfolio management (PPM) practices in a healthcare unit. Organizational culture is an unwritten code that shapes the behaviour of employees, the way they work in teams, their participation in the decision-making process, and their contribution to developing the overall personality of the organization (Schein, 1990). Project managers globally encounter several challenges to achieve the desired outcome of their projects. A few of the challenges are unrealistic project deadlines, a shortage of budget, team conflicts, scarcity of organizational resources, problems in delegating authority, and restricted communication flow among cross-functional team members. On top of that, some project managers have restricted authority to deal with delicate project problems. Almost every organization faces such project management issues (Pinto, 2000). Interestingly, even organizations with established project management systems and well-trained managers confront these frustrations. Now the question arises: Why do some organizations, despite having robust project management systems and skilled managers, fail to achieve the desired project outcomes in an efficient and effective way?

Organizational culture prescribes the manager's decision-making style, mode of communication, resource allocation, time, and risk management. The manager's leadership and managerial styles are essentially dictated by the organization's culture. Teamwork, creativity, innovation, flexibility, knowledge sharing, employee autonomy, support, and feedback are all factors that play a vital role in successfully executing a project. All these factors are key ingredients of an organization's culture (Alexandrova, 2020).

* Corresponding author Tel.: +64 3 211 2699; Mobile: +64 210 255 5745 E-mail address 2023004041@student.sit.ac.nz (O. N. Kakumanu)

ISSN 2371-8374 (Online) - ISSN 2371-8366 (Print) © 2025 by the authors; licensee Growing Science, Canada. doi: 10.5267/j.jpm.2025.1.006

The challenges faced during project execution make project management analysts believe in the presence of underlying issues that are beyond the scope of project management itself. Research shows that organizations' proficiency in project management highly depends on organizational culture (Katane & Dube, 2017; Kerzner, 2001). Organizations with collaborative cultures, supported by everyone, ensure the maximum efficiency of project outcomes. Thus, it manifests that organizational culture has an influence on the project management practices of managers.

1.2. Research Background

Few studies have been conducted on the positive effect of organizational culture on project, program, and portfolio management practices. The culture of New Zealand healthcare is quite different from other developed countries. As New Zealand has a diverse population, including the indigenous Māori population and a significant number of immigrants, the healthcare system strives to be culturally sensitive and inclusive, recognizing the importance of Māori health and incorporating cultural practices into healthcare delivery. Furthermore, Māori traditional healing practices are integrated into the healthcare system, acknowledging the importance of both traditional and Western medicine. Healthcare in New Zealand is mainly funded by the government to provide accessible, quality-oriented, and affordable healthcare to the general public. New Zealand healthcare systems are highly sensitive about their stakeholders' mental health. All these factors must be taken into account when designing and managing healthcare projects and programs in New Zealand. This also influences the organizational culture of healthcare units operating in New Zealand.

1.3. Organizational Culture

Organizational culture is a unique factor of shared values and beliefs that sets an organization apart from others (Judge & Robbins, 2017). Culture often manifests collective beliefs, values, norms, processes, and codes of conduct that form the foundation of an organization. Culture often provides an unwritten framework of acceptable behaviours and unacceptable behaviours within an organization. Organizational culture aids employees in better performing their jobs and solving problems in a definitive way (Senge, 2002). Culture is an intangible force that encourages employees to engage in work-related activities. Company founders often establish unwritten rules in the form of its culture, which act as behavioural guidelines for employees (Schein, 1992). Organizational culture affects organizational behaviour as it influences five key processes of an organization: commitment, communication, cooperation, implementation, and decision-making (Azadi et al., 2013). To effectively conduct project management practices, organizational culture is a key factor that influences employees' engagement as well as their work performance (Hasan, 2023). Employee performance is crucial for the successful implementation of PPM practices. One of the factors that employee performance depends on is the internal and external environment of the organization, specifically the culture of the organization. Thus, employee performance also reflects the essence of organizational culture (Zhenjing et al., 2022).

Organizational culture can be defined in many ways, but a classic definition of culture is 'the collective programming of the minds of individuals by which one group distinguishes itself from other groups' (Hofstede, 2016). Organizational culture is an enduring set of beliefs and values that can distinguish one organization from another (Cameron, 1988). Organizational culture provides a blueprint on which the organization operates; it defines how things need to be done in an organization. Thus, organizational culture provides processes within an organization that facilitate the successful execution of projects, programs, and portfolio management while achieving major organizational benefits. Research highlights that one of the biggest loopholes for successful project management is cultural deficiency (Palmer, 2002). Thus, companies have to promote a supportive project-oriented culture among their members.

1.3.1. Types of Organizational Culture

The Competing Values Framework (CVF), developed by Cameron and Quinn (2006), provides a comprehensive model for understanding and classifying organizational culture. The CVF identifies four distinct cultural types: clan (collaborative), adhocracy (innovative), market (competitive), and hierarchy (control-oriented).

Clan Culture emphasizes collaboration, trust, and teamwork, fostering open communication and support in project management but may hinder decisiveness if consensus is overly prioritized. Adhocracy Culture values innovation and adaptability, encouraging flexibility and quick responses but can lack structure, risking project delays. Market Culture focuses on competition, goal achievement, and measurable outcomes, promoting accountability but may limit collaboration by encouraging individualism. Hierarchy Culture stresses control, stability, and procedural adherence, providing clear structure and task completion but may resist change and stifle innovation due to excessive bureaucracy. Each culture has unique strengths and potential downsides in a project management context.

For an organization to meet its strategic and departmental goals, there is a need to understand the culture of the company. Researchers (Martin & Siehl, 1983) emphasize that every company culture is not homogeneous; instead, every company is an amalgamation of different cultural elements. Companies simultaneously manage products, markets, customers, departments, and geographical locations, requiring different subcultures to effectively operate in these areas. For instance, a hierarchical

organization may have a research department that leans more towards the creative side (adhocracy), while the production department leans more towards competitiveness (market), and the human resources department exhibits a collaborative (clan) nature. In reality, every company has different subcultures in various functions or departments, which sometimes manifest in the primary culture of the company. To effectively manage projects, programs, and portfolios, managers must adapt to different cultural and subcultural needs to achieve the desired outcomes.

1.4. Research Objectives

This research addresses a gap by examining how organizational culture affects PPM practices in New Zealand's healthcare industry. The findings offer healthcare leaders insights into cultivating a supportive culture for effective project execution, improving patient care, operational efficiency, and organizational resilience. By identifying key cultural factors, this study contributes to targeted strategies for enhancing organizational culture and project outcomes in healthcare settings. The aim of this research is to examine the effect of organizational culture on PPM practices in healthcare.

The key objectives of the study are:

- 1. To examine whether organizational culture has an effect on project portfolio management practices.
- 2. To determine whether the culture of healthcare organizations affects project portfolio management practices.
- 3. To shed light on key organizational culture factors that have a significant effect on project portfolio management practices.

These objectives are interconnected and collectively contribute to achieving the overarching research aim. By examining the effect of organizational culture on PPM practices, the study provides a comprehensive understanding of how cultural factors influence project outcomes in healthcare settings. The second objective focuses specifically on the healthcare industry, recognizing its unique context and challenges. The third objective aims to identify the specific cultural dimensions that have the most significant impact on PPM practices, providing actionable insights for healthcare leaders and project managers.

1.5. Research Significance

This research is significant as it addresses a gap in the existing literature by examining the effect of organizational culture on PPM practices specifically within the healthcare industry in New Zealand. The findings of this study will provide valuable insights for healthcare leaders and project managers, enabling them to understand the impact of organizational culture on PPM effectiveness and make informed decisions to cultivate a culture that supports successful project execution. By identifying the key cultural factors that influence PPM practices, this research can contribute to the development of targeted interventions and strategies to enhance organizational culture and improve project outcomes in healthcare settings. Ultimately, this research aims to improve patient care, operational efficiency, and organizational resilience in the healthcare sector by fostering a culture that is conducive to effective PPM.

Organizational culture represents a company's informal methods of communication, coordination, and team management. It instills values and beliefs among employees that are important to the company. To manage projects effectively, aspects such as budget allocation, providing flexible working conditions, meeting deadlines, and resolving team conflicts must be addressed. These cannot be done in isolation; a supportive organizational culture aligned with project objectives is essential. Even a slight misalignment between the two can lead to poor outcomes (Alexandrova, 2020). This study is novel as it examines the effect of organizational culture on the effectiveness of PPM practices in the digital healthcare sector in New Zealand. It is valuable to project managers, policymakers, and strategists by providing scientific insights into which cultural factors need greater focus to optimize PPM practices. This can encourage organizations to strengthen their culture and improve project performance. Thus, one can say that organizational culture has a significant impact on PPM. Prior research has suggested that the organization's culture has an impact on the successful management of projects, programs, and portfolios (Alexandrova, 2020; Dube & Katane, 2017; El Khatib et al., 2022; Morrison et al., 2008; Zheng et al., 2019). To confirm the generalizability of previous research and to figure out whether past studies are truly representative of the global population, there is a need to examine the effect of organizational culture on PPM in different geographical contexts and using different research methodologies (Alexandrova, 2020; Morrison et al., 2008). To the best of the researcher's knowledge, there is no single study that has examined the effect of organizational culture on PPM of managers working in the healthcare industry. There is also no published research that studied this effect in healthcare organizations operating in New Zealand. This study addresses that research gap, with a particular focus on PPM practices in healthcare.

1.6. Resource Based View

Resource-based view (RBV) of the firm posits that organizations can achieve a sustainable competitive advantage by leveraging their unique resources and capabilities (Barney, 1991). The resource-based view suggests that organizations derive competitive advantages from three distinct types of resources: physical, organizational, and human resources. Physical resources encompass land, machinery, plants, and finances. Organizational resources include structure, planning, hierarchy, and systems. Human resources comprise employee skills, intelligence, relationships, organizational culture, work autonomy, reporting structures, and compensation policies (Barney & Wright, 1997). In the context of PPP management, organizational culture can be viewed as a strategic resource that enables effective resource allocation, risk management, and decision-making (Genc, 2013).

1.6.1. Characteristics of Organizational Culture as a Valuable Resource

Several characteristics make organizational culture a valuable and strategic resource (Barney, 1991):

Valuable: A positive organizational culture can attract and retain top talent, enhance employee motivation and productivity, and foster a positive brand image, all of which contribute to the organization's bottom line.

Rare: Unique cultures that are not easily replicated by competitors can provide a distinct advantage. For example, a culture that emphasizes innovation and risk-taking can lead to the development of unique products or services that are difficult for competitors to imitate.

Inimitable: The complex and socially constructed nature of organizational culture makes it difficult for competitors to imitate. It is not simply a matter of copying policies or procedures; it involves replicating the underlying values, beliefs, and norms that have developed over time.

Non-substitutable: There are no readily available substitutes for a strong organizational culture. While other resources, such as technology or financial capital, can be acquired or replaced, a positive culture is built over time and is deeply embedded in the organization's social fabric.

The theory of organizational change provides insights into how culture can influence the adoption and implementation of new practices, such as digital transformation initiatives in healthcare. A culture that is open to change, encourages experimentation, and supports risk-taking can facilitate the successful integration of new technologies and processes (Piwowar-Sulej, 2020).

1.7. Project, Program, and Portfolio Management

Managing projects, programs, and portfolios requires similar skills, but these entities are quite different from each other. A project is defined as an "endeavour in which human, material, and financial resources are organized in an innovative way to carry out an extraordinary scope of work, in line with defined specifications, within cost and time constraints, to achieve a positive change determined by quantitative and qualitative goals" (Turner, 1993). A program is defined as the combination of multiple projects falling under the same category. A portfolio is a combination of multiple projects and programs managed strategically. This implies that projects lie at the bottom of the pyramid whereas a portfolio lies at the top of the pyramid (portfolio-program- project). The job of a project manager is to manage time, resources, and labour to achieve the scope of work of the project. By doing so, they need ample skills to plan, organize, allocate, and coordinate resources to achieve the desired deliverables. Project managers are also able to solve challenges coming their way. The role of a program manager is not to manage all clusters of related projects individually but to have oversight that all added projects will be able to meet the program objectives. Project managers are already dedicated to managing projects, but the role of a program manager is to check that all projects add value, creating balance among them to ensure they align well with the program objectives. If they identify any discrepancies, they can adjust or remove the offending project(s) from the program. Portfolio managers perform a strategic role in designing a winning business portfolio of projects and programs. Portfolio managers have to ensure that the organization's portfolio is neither too risky nor fully risk-averse. They need to find a middle ground and manage programs in the company's portfolio accordingly. Monitoring and controlling are the key duties they need to perform to achieve a winning portfolio.

PPM continues to be a strategic approach focused on selecting projects and allocating resources, essentially identifying the most valuable opportunities for the organization's combined endeavours (Pennypacker & Cabanis-Brewin, 2003). Resources are allocated based on the importance of the project and program within the given portfolio (Blichfeldt & Eskerod, 2008). While adjusting the project portfolio, managers must gather all relevant information to strategically prioritize projects and programs to achieve organizational objectives (Koh & Crawford, 2012). In a dynamic environment, there is always a chance of uncertainty, thus necessitating constant monitoring of the project portfolio to ensure alignment with organizational strategic objectives (Petit, 2012).

1.8. Organizational Culture as Source of Organizational Learning

Organizational culture plays a vital role in shaping organizational learning processes (Alsabbagh & Al Khalil, 2017). Developing a learning organization is not merely a goal but rather a process and journey. There is a dire need to cultivate an organizational culture that promotes continuous improvement and compels employees to change, develop, and enhance their behaviours accordingly. To effect a particular change within an organization, there must be a strong cultural force that enables individuals to adapt their work processes accordingly. The introduction of transformative organizational changes, such as transitioning from conventional working processes to more digitalized procedures and data-driven solutions, necessitates a robust cultural force that encourages individuals to focus their efforts in the right direction and assists managers in implementing effective project, program, and portfolio management practices. Open communication is also a key practice that fosters effective organizational change and organizational learning (Bucata & Rizescu, 2017).

Organizational culture is usually created by the founders of an organization, and they try their best to preserve it through their routine behaviour. For instance, if an employee likes to work in isolation and is reluctant to share his knowledge with other team members, then practitioners of organizational culture create working teams to collaborate on projects by mutually sharing knowledge with each other. This way, they make an employee experience the company's culture of knowledge sharing among team members. To boost collaboration in the work environment, organizations design structures that preach their culture; for example, moving from cubicle offices to team-oriented office layouts, which inherently creates an experience of work flexibility, collaboration, and knowledge sharing. Thus, organizational culture has the ability to facilitate human interactions, which is the most vital factor for collaboration and learning.

1.9. Organizational Culture and PPM Practices

Organizational culture has a significant influence on project portfolio management practices and employee behaviours (Henrie & Souza-Poza, 2005; Kerzner, 2002). It encompasses elements such as trust, communication, work environment, and leadership style, all of which contribute to well-formed decision-making processes (Kester et al., 2011). According to Ojiako et al. (2021), effective project portfolio management practices enhance organizational ambidexterity—the ability of an organization to align all units efficiently. This, in turn, improves its capacity to innovate and adapt to necessary changes in response to evolving environmental conditions. Project management necessitates effective risk management strategies. If an organization's culture is flexible and adaptable to change, as is often seen in learning organizations, it encourages individuals to embrace change. Portfolios consist of multiple projects and programs and managing them well may pose challenges such as inadequate resources, undefined roles, misalignment with strategic objectives, and insufficient information (Elonen & Artto, 2003). Project portfolios are devised to mitigate risks, align with organizational strategic goals, and influence business processes (Mican et al., 2022). Research findings have established a connection between organizational culture and the efficiency of project management practices, underscoring the importance of understanding and leveraging cultural elements in project portfolio management (Zanfelicce & Rabechini, 2021).

Organizational culture significantly influences project management practices and employee performance, which are essential for achieving strategic goals (Mathew, 2007). As businesses evolve towards complex projects, adopting new managerial styles becomes necessary (Piwowar-Sulej, 2020). Larson and Gray (2011) highlight that a misaligned culture can hinder project success, while strong leadership and a supportive environment enhance project execution (Belassi et al., 2007). Non-project-based organizations shifting to a project-oriented approach should foster a flexible culture for effective knowledge transfer (Ajmal & Koskinen, 2008). Additionally, studies in various industries stress the importance of collaboration, commitment, and inter-functional integration for successful project implementation (Nguyen & Watanabe, 2017; Morrison et al., 2008). A study on medium and large financial enterprises in Poland found that technological innovations led to projects focused on managing security and risk in the sector (Piwowar-Sulej, 2021). Advances in IT systems significantly changed how employees work, interact with clients, and manage processes. Clients now seek personalized financial solutions, shifting from standard demands to guidance on spending and investment. The emergence of new products and services reflects a more customer-oriented approach in Poland's financial sector. The study also revealed that project maturity levels in this sector are higher than in others and highlighted how organizational culture can influence project management methodologies.

Research by Alexandrova (2020) on 184 project-based organizations in Bulgaria during 2017-2018 used surveys to collect data from study participants using a purposive sampling technique. The study aimed to assess the impact of organizational culture on the effectiveness of project portfolio management. It suggests that if the organizational culture prefers to adopt a flexible managerial style, then the project portfolio aims to achieve sustainable financial results. The study indicates a strong association between an organizational culture of open communication and the placement of projects in the portfolio that are well-aligned with the strategic objectives of the organization. It promotes efficient communication within project-oriented organizations to achieve strategic objectives through the implementation of effective management practices. The more teamoriented and trust-oriented the culture, the better the allocation of resources among various projects.

2. Materials and Methods

This study uses a positivist research philosophy to test the proposed hypothesis within a specific geographical context—New Zealand—while considering the generalizability of the research approach and findings. It is explanatory in nature, focusing on testing the hypothesis and explaining the cause-and-effect relationship between the independent variable (organizational culture) and the dependent variable (project portfolio management practices). A quantitative research design is deemed most appropriate, and the researcher uses a questionnaire-based approach for data collection, as it is convenient, fast, and aligned with the study objectives (Crowther & Lancaster, 2012). Deploying a questionnaire ensures detachment in articulating participant responses, thereby reducing researcher bias (Sevilla et al., 1992).

2.1. Scales

Organizational culture is measured on a five-point Likert scale from "Strongly Disagree" to "Strongly Agree," using the Organizational Culture Assessment Questionnaire (OCAQ). The scale was adapted from (Sashkin & Rosenbach, 1996) and consists of 34 items (Appendix A). To reduce respondents' bias, 10 items in the OCAQ scale are negatively worded and were reverse coded while performing analysis. The scale has five dimensions: managing change, achieving goals, coordinated teamwork, customer orientation, and cultural strength.

Managing Change: To respond to changing internal and external environments, organizations need to adapt and manage themselves. This dimension assesses the degree to which participants believe their organization is adapting to and managing change proactively.

Achieving Goals: The OCAQ prompts respondents to evaluate the organization's effectiveness in attaining its objectives, the level of coherence and mutual understanding regarding these objectives, and the extent to which shared values encourage progress and advancement rather than maintaining the current state.

Coordinated Teamwork: In order to achieve organizational objectives, it is crucial to determine how well the individual work efforts gel together. The OCAQ evaluates how well an organization manages the efforts of individuals and teams to create a sense of shared collaboration among them.

Customer Orientation: To create value for their clients and customers, organizations should align their needs and wants with their strategic goals. This dimension aims to assess the degree to which organizational activities are aligned to achieve customer objectives. The scale also determines whether the organization's strategic goals are aligned well with their customer orientation.

Cultural Strength: Strong culture is deemed the most important resource for an organization. In times of crises, when all company resources are needed (human, capital, etc.) a strong culture encourages the organization to survive and ensures its better functioning. This dimension of OCAQ assesses the strength of the company's culture by asking participants to show how much they agree on shared values and live by those values.

Previous research on measuring PPM effectiveness (Patanakul, 2015; Alexandrova, 2017; 2020) has relied on limited-item scales, lacking depth in critical areas like conflict management, leadership, and strategic decision-making. In this study, the researcher has adopted items from Alexandrova (2017) but supplemented these with an additional 23 items that are essential in measuring the effectiveness of project portfolio management practices as per the literature. The scale has also taken into account the phases of the project maturity management lifecycle in designing this scale. A five-point Likert scale is used to measure the items, starting from "Never" and continuing through "Always".

2.2. Study Sample

This study examines the influence of organizational cultural on key PPM practices within a single healthcare organization named 'Te Whatu Ora' or 'Health New Zealand'. The sample includes project managers, business analysts and PPM staff members working in the Data & Digital Business Unit of Te Whatu Ora. To select individuals from whom to collect data representing the management staff of this healthcare organization, a convenience sampling technique would be used. Personalized emails were sent to each potential participant's official email address to invite them to participate in the study. To enhance the response rate, a strategic follow-up approach was implemented. Reminder emails were dispatched to non-respondents 15 days after the initial invitation. The study's final sample size comprises 35 participants. To safeguard participant rights, ensure participant welfare, and maintain the integrity of the study process, ethical considerations are taken into account. All responses are kept anonymous, and participant identities remain confidential.

3. Results

The data of 36 respondents were collected and after treating missing values from the datasheet the final sample size is of 35 individuals. Data is being analysed using SPSS software.

Table 1

Demographic Analysis

mographic Analysis Variables	Categories	Frequency	Percent
Age	21-30 years	3	8.6
Agc	31-40 years	11	31.4
	41-50 years	10	28.6
	51-60 years	7	20.0
	61-70 years	1	2.9
	70+ years	2	5.7
	Missing	1	2.9
	Total	35	100
	Male	15	42.9
Gender	Female	18	51.4
Gender	Prefer not to say	1	2.9
	Missing	1	2.9
	Total	35	100
	NCEA Level 1 – 3 or equivalent	3	8.6
	Certificate Certificate	2	5.7
Education Level	Diploma	5	14.3
	Bachelor's degree	13	37.1
	Postgraduate or master's degree	10	28.6
	Other (please specify)	2	5.7
	Total	35	100
	Less than 2 years	8	22.9
	2-5 years	11	31.4
Organizational Tenure	6-10 years	9	25.7
	11-14 years	1	2.9
	15-18 years	2	5.7
	19-24 years	0	0
	More than 25 years	3	8.6
	Missing	1	2.9
	Total	35	100
	Group Manager	3	8.6
Role in the Organization	Application Services Manager	2	5.7
Č	Change & Adoption Manager	1	2.9
	Project Management Office Lead/Manager	1	2.9
	Project Manager Project Manager	6	17.1
	Programme Manager	2	5.7
	Business Analyst	12	34.3
	Project Coordinator/Project Facilitator	3	8.6
	Other (please specify)	3	8.6
	Missing	2	5.7
	Total	35	100
	Sector Digital Channels	3	8.6
Business Functions	Integration and Delivery	22	62.9
	Data Services	1	2.9
	Digital Enterprise Services	1	2.9
	Business Services	6	17.1
	Missing	2	5.7
	Total	35	100

It is highlighted in Table 1 that the majority of the respondents (21) fall in the age categories of 31-50 years (60.0%) and only 2 respondents are above 70 years in age (5.7%). It can be seen that 51.4% of the dataset consists of female participants, and 42.9% of the dataset consists of male participants. There are 10 participants (28.6%) who hold a postgraduate degree and 13 participants (37.1%) hold a Bachelor's degree. Majority of the participants (31.4%) have an organizational tenure of 2-5 years. The largest category of participants (34.3%) in the sample perform a role of business analyst. Majority of the participants (62.9%) belong to the business function of integration and delivery.

Table 2
Impact of Transition to Digital HealthCare on Your Daily Work Routine

	Frequency	Percent
Positively	21	60.0
Neutral	9	25.7
Not Sure	3	8.6
Missing	2	5.7
Total	35	100.0

Table 3Support of Organizational Culture in Transitioning from Conventional Healthcare to Digital Healthcare

	Frequency	Percent	
Highly Supportive	5	14.3	
Supportive	16	45.7	
Neutral	9	25.7	
Un Supportive	5	14.3	
Total	35	100.0	

Table 2 highlights that 21 participants (60%) say that while transitioning from conventional to digital healthcare they felt a positive impact on their daily work routine whereas 9 participants (25.7%) recorded a neutral impact on their work routine. None reported a negative impact, while 3 (8.6%) were not sure. Table 3 highlights that 21 participants (60%) agree that their organizational culture is supportive in the overall process of transitioning from conventional healthcare to digital healthcare.

Table 4 Descriptive Statistics

						Skewness		Kurtosis	
	N	Min	Max	Mean	Std. Deviation	Statistic	Std. Error	Statistic S	td. Error
Organizational Culture	35	1.91	3.91	3.04	0.41	-0.26	0.40	0.60	0.78
Project Portfolio Management Practices	35	1.74	4.48	3.29	0.61	-0.41	0.40	0.18	0.78

Table 4 shows that the average response of individuals to organizational culture is 3.044 and their average response to PPM practices is 3.294. This shows that on average individuals recorded a somewhat neutral response to these variables. To determine the normality of the variables, skewness and kurtosis analysis was performed on the dataset. The values of skewness and kurtosis fall in the range of -2 to +2, indicating that the data follows a normal distribution (George and Mallery, 2010).

3.1. Validity and Reliability

To determine validity and reliability of the constructs, Confirmatory Factor Analysis (CFA) is being performed in Amos. Testing the reliability of the constructs measures the internal consistency among items. Reliability analysis shows whether the items measuring the intended construct are consistent and coherent with each other. Using reliable constructs to generate the dataset is necessary to ensure research quality (Hancock et al., 2010).

Table 5Validity and Reliability of the Constructs

variatty and ixchaon	ity of the Consti	ucts			
	Cronbach Alpha	Composite Reliability (CR)	Average Variance	PPM Practices	Organizational Culture
	_	-	Extracted (AVE)		_
Organizational Culture	0.898	0.947	0.783	0.712*	1
PPM Practices	0.952	0.950	0.420	1	0.712*

p-value is ≤ 0.001

This study assessed construct reliability using Cronbach's Alpha and Composite Reliability (CR). Cronbach's Alpha values were 0.898 for organizational culture and 0.952 for PPM practices, indicating good and excellent reliability, respectively, as values above 0.7 are acceptable and above 0.9 are excellent (Mohd Arof et al., 2018). CR values, calculated via Amos, were 0.947 for organizational culture and 0.950 for PPM practices, further confirming their reliability as both exceed the acceptable threshold of 0.7 (Hair et al., 2021). Thus, the measurement constructs used in this study are highly reliable. Convergent validity shows that all items converge on their intended constructs. To measure the convergent validity of the constructs, Average Variance Extracted (AVE) was computed in Amos. The AVE of organizational culture is 0.783 and for PPM practices is 0.420. According to Fornell and Larcker (1981), constructs having an AVE value greater than or equal to 0.5 show convergent validity. Table 5 shows that PPM practices have an AVE of 0.42, which is slightly less than 0.5. As the major caveat of this study is a smaller sample size (n= 35), there is no need to delete items from the construct as long as the constructs are reliable. Correlation analysis aims to measure the association among variables. The Pearson correlation between organizational culture and PPM practices is positive and significant (r = 0.712, p-value < 0.001).

3.2. Mean Comparison

All 27 items of project program and portfolio management practices is being ranked on the basis of their mean values. Also, all the five dimensions of organizational culture is being ranked on the basis of their mean values.

Table 6Ranking of Items of Project Program and Portfolio Management Practices

Project Program Portfolio Management Practices	Mean	Min	Max
8: Flexible working arrangements are promoted where employees' work can be completed offsite or in flexible working hours.	3.88	1	5
21: Strong relationships within the organization are encouraged to promote trust, communication, and collaboration throughout the project lifecycle.	3.69	1	5
13: Despite facing risks, managers can effectively run projects and manage portfolios.	3.66	1	5
16: Timely updates and insights are provided to senior management to support strategic decision-making.	3.56	1	5
14: Roles and responsibilities are clearly delegated to relevant team members.	3.54	1	5
20: The project management office (PMO) or equivalent provides valuable support and guidance to the teams.	3.53	1	5
12: Risk mitigation strategies are in place to minimize the effect of potential threats on project, programme, and portfolio deliverables.	3.42	2	5
3: Projects in the portfolio are designed to have goals that fully match the strategic goals of the organization.	3.36	1	5
6: Resources are allocated among projects as per the strategic priorities of the organization process.	3.33	1	5
10: Project, programme, and portfolio goals are communicated clearly to the team members.	3.32	1	5
5: Projects and programmes are ranked in the portfolio based on their strategic prioritization.	3.31	1	5
18: Strong leadership is demonstrated to effectively motivate employees to achieve project goals.	3.29	1	5
24: The performance of projects, programmes and portfolios are regularly monitored and evaluated against predefined metrics.	3.29	1	5
1: Project portfolios are designed to achieve sustainable financial results.	3.28	2	4
11: For managing internal and external changes and risks, effective risk management processes are established.	3.27	1	5
15: Transparent communication is maintained on project portfolio activities, decisions, and outcomes.	3.26	1	5
26: Conflicts are being resolved effectively among employees at all levels to maintain a positive and productive work environment.	3.26	1	5
19: Project, programme, and portfolio managers collaborate effectively with teams to ensure alignment with organizational strategy.	3.25	1	5
4: Project goals are adjusted and realigned with changing organizational priorities.	3.24	2	5
22: Employees at all levels are engaged to gather input, feedback, and support for project portfolio decisions.	3.20	1	5
17: Opportunities to consolidate, retire, or reprioritize projects are encouraged to be taken to better align with organizational objectives.	3.16	2	5
27. Overall, I believe project, programme, and portfolio management practices are effective in achieving project and organizational goals.	3.15	1	5
2: Programmes effectively align multiple projects to achieve organizational objectives.	3.12	2	4
9: Project management processes are well-defined and consistently followed.	3.06	1	4
25: Feedback mechanisms are in place to gather input and suggestions for continuous improvement in project, programme, and portfolio management practices.	2.89	1	5
3: Projects are often completed on or before their scheduled deadlines.	2.83	1	4
7: Resources are allocated efficiently across projects to maximize utilization and minimize bottlenecks.	2.79	1	4

Table 6 shows the ranking of the items of project program portfolio management practices on the basis of their mean. Item 8 (Flexible working arrangements are promoted where employees' work can be completed offsite or in flexible working hours) has the highest mean value of 3.88 whereas item 7 (Resources are allocated efficiently across projects to maximize utilization and minimize bottlenecks) has the lowest mean value of 2.79. The varying mean values of the items shows that in a digital unit of Healthcare in New Zealand the effectiveness of conducting PPM practices is different for every practice. For instance, it's easier to introduce flexible working hours but it's much more difficult comparative to other PPM practices to allocate resources among multiple projects. Mean values above 3.5 shows that respondents somehow agree to the given statements whereas mean values below 3 shows respondents somehow disagree to the given statements. Providing flexible working conditions (M= 3.88), creating trust (M = 3.69), managing project risks (M = 3.66), providing timely insights (M = 3.56) and delegating responsibilities (M = 3.54) are few of the practices that are effectively managed by Project managers. On the contrary, efficient feedback mechanisms (M = 2.89), meeting project deadlines (M = 2.83) and efficient allocation of resources (M = 2.79) are few the practices that are not rightly done by Project managers working in digital unit of Healthcare in New Zealand.

Table 7Ranking of Different Dimensions of Organizational Culture

Organizational Culture	Mean	Min	Max
Customer Orientation	3.3551	2.14	4.14
Coordinated Team	3.2895	1.67	4.40
Cultural Strength	3.0310	1.33	4.00
Managing Change	2.9071	1.78	4.00
Achieving Goals	2.6648	1.83	3.83

Table 7 shows that mean values of five dimensions of organizational culture. Customer orientation has the highest mean value of 3.35 whereas achieving goals has the lowest mean value of 2.66. This shows that among all the five factors of organizational culture the factor which highly influences the effectiveness of project portfolio management practices is customer orientation. After that coordinator team with the mean value of 3.29 has the highest influence on PPM practices. Cultural strength (M = 3.03), managing change (M = 2.90), and achieving goals (M = 2.66) has a tendency to effect PPM practices. In the given study it is highlighted that if the culture of an organization is customer centric then it will highly facilitate managers in conducting effective project portfolio management practices.

3.3. Regression Analysis

To test the research hypothesis, linear regression was performed in SPSS.

Hypothesis: Organizational culture has a significant effect on the effectiveness of project portfolio management (PPM) practices in healthcare.

Table 8
Model Summary

model Summer	J			
Model	r	r Squared	Adjusted r Squared	Std. Error of the Estimate
1	0.712ª	0.508	0.493	.43108

a. Predictors: (Constant), Organizational Culture

Table 9Regression Analysis

				Standardized				
		Unstandar	lized Coefficients	Coefficients			Collinearity	Statistics
	Model	Beta	Std. Error	Beta	<i>t</i>	Sig.	Tolerance	VIF
1	(Constant)	0.174	0.540		0.322	0.749		
	Organizational Culture	1.025	0.176	0.712	5.832	0.000	1.000	1.000

Dependent Variable: PPM Practices

Table 8 shows that the value of r is 0.712 and the value of r squared is 0.508. The r squared of the model indicates 50.8% of variability in PPM practices is due to changes in organizational culture. A higher value of r squared indicates a better regression model. Table 9 shows that organizational culture has a positive and significant effect on PPM practices ($\beta = 1.025$, p-value = 0.000). Thus, the hypothesis is accepted. Multicollinearity describes a situation when two or more variables are highly correlated to each other. The correlation between the two constructs is less than 0.8, indicating no multicollinearity. Moreover, Table 9 also shows that the value of the Variance Inflation Factor (VIF) is 1, indicating no traces of multicollinearity among the study constructs (Shrestha, 2020). The value of the Durbin Watson statistic of the current regression model is 1.201, indicating no autocorrelation among residuals (Turner, 2020).

Regression Analysis of Dimensions of Organizational Culture

Regression Than ysis of Dimensions of Organizational Culture							
Dimension	Constant	Unstandardized Beta	Standard Error	p-Value			
Managing Change	1.777	0.522	0.186	0.008			
Achieving Goals	1.653	0.616	0.204	0.005			
Coordinated Team	0.948	0.713	0.123	0.000			
Customer Orientation	0.700	0.773	0.161	0.000			
Cultural Strength	1.379	0.632	0.147	0.000			

Dependent Variable: PPM Practices

Simple linear regression analysis has been performed one by one on every single dimension of organizational culture and the output is shown in Table 10. There is a positive and significant effect of managing change on PPM practices ($\beta = 0.522$, p-value = 0.008). Similarly, there is a positive and significant effect of achieving goals ($\beta = 0.616$, p-value = 0.005), coordinated team ($\beta = 0.713$, p-value = 0.000), customer orientation ($\beta = 0.773$, p-value = 0.000), and cultural strength ($\beta = 0.632$, p-value = 0.000) on PPM practices. It is evident that among all the five dimensions of organizational culture, customer orientation has the strongest ($\beta = 0.773$) whereas managing change has the least effect ($\beta = 0.522$) on project portfolio management practices.

4. Discussion

Data analysis shows that there is a direct impact of organizational culture on PPM practices. Among the five dimensions of organizational culture (managing change, achieving goals, coordinated team, customer orientation, and cultural strength) used in this study, customer orientation has the greatest impact on the efficacy of PPM practices. From this one could infer that the emphasis on data and digital initiatives in healthcare units highlights the sector's focus on customer orientation. This shift is strongly reflected in their organizational culture and significantly impacts the efficiency of PPM practices in New Zealand healthcare sector. Research by Morrison et al., (2008) highlights the strong influence of organizational culture on project management practices in South African matrix organizations. Assessing 29 organizations across 12 cultural dimensions, including communication, decision-making, and people management, the study found a positive correlation between organizational culture and project management effectiveness. Key dimensions like open communication, effective people management, and customer-oriented culture significantly enhance project management practices. The findings emphasize that a coordinated team culture is particularly impactful in improving the success of project portfolio management (PPM). A study in Pakistan examined the impact of organizational culture, communication, and clarity on the success of construction projects, with project manager competencies as a moderating factor (Muneer et al., 2022). It found that strong organizational culture, effective communication, and clear project scope significantly contribute to project success. In developing economies, the construction industry often faces challenges such as delays, cost overruns, and disputes caused by cultural differences among team members (Tijhuis, 2011). Their study also highlighted that competent project managers positively moderate the relationship between these factors and project success. Projects drive change within organizations, impacting both the company and its market. Introducing new products or services can ripple across the organization, making cultural alignment critical to avoid undermining its foundation (Suda, 2007). Departments also have unique subcultures that must align with the organizational culture for effective collaboration. Project teams, comprising members from multiple departments, carry diverse subcultures. Leaders must unify these teams under a project culture aligned with the organization's dominant culture to ensure cohesion and productivity. Awareness of cultural differences enable leaders to address conflicts without compromising performance. Cultural misalignment can hinder PPM practices, affecting the entire organizational portfolio, not just individual projects. As project management often acts as a subculture within organizations, integrating it with the dominant culture is essential (Suda, 2007). Project Management Offices (PMOs) play a vital role in embedding organizational culture into work practices, but their effectiveness depends on adherence to cultural principles (Debora & Chuck, 2014).

For a project, program, or portfolio to be successful, managers need to consider the following:

- Consider organizational culture as the personality of an organization.
- Understand the core values, processes, and practices of their organization's dominant culture, regardless of how many departmental subcultures are present.
- Align strategy, leadership, and organizational culture to harvest maximum benefits.

This study's focus on a healthcare organization undergoing a digital transformation adds a unique dimension to the existing literature, highlighting the importance of cultural adaptability and change management in the successful implementation of digital health initiatives. The present study fullfill its aims and objectives.

1. To examine whether organizational culture has an effect on project portfolio management practices.

Studies show a positive and significant effect of organizational culture on project portfolio management practices (Kester et al., 2011; Zanfelicce & Junior, 2021). Organizational culture tends to affect the norms of working within an organization. The culture of healthcare organizations affects project portfolio management practices, organizational culture builds norms for how employees interact with one another and how flexible they are in accepting new changes within the organization (Waisfisz, 2012). If there is any contradiction between the objectives of a project, program, or portfolio and the organizational culture, managers may struggle to deliver project outcomes on time, leading to setbacks. Having a well-defined organizational culture is crucial for a company's success. Effective managers are flexible, performance-driven, adaptable, and empathetic. To ensure project success, it is essential to train leaders to develop a deeper understanding of their organizational culture. A study conducted by Piwowar-Sulej (2021) on financial companies operating in Poland highlights that organizational culture tends to fulfil its objectives. Over time, companies must introduce reforms to upgrade their systems, processes, and working strategies. Additionally, they need to align their organizational culture. For instance, a company that prioritizes its customers should have a flexible and interactive work culture.

2. To determine whether the culture of healthcare organizations affects project portfolio management practices.

This study aims to determine the effect of the culture of healthcare organizations in New Zealand on the effectiveness of project portfolio management (PPM) practices. Mean comparisons and regression analysis were used to assess the impact of organizational culture on PPM practices. The study was conducted in New Zealand healthcare, focusing on digital healthcare

units, to examine how organizational culture influences the effectiveness of project portfolio management strategies. Regression analysis shows a significant effect of organizational culture on PPM strategies. This study provides a clear indication that organizational culture not only affects effective PPM practices in industries such as finance (Piwowar-Sulej, 2021) and construction (Muneer et al., 2022) but also in the healthcare industry.

3. To shed light on key organizational culture factors that have a significant effect on project portfolio management practices.

The five dimensions of organizational culture are managing change, achieving goals, team coordination, customer orientation, and cultural strength. To determine how significantly these cultural factors affect PPM practices in a digital healthcare unit in New Zealand, regression analysis was performed. All dimensions showed a significant tendency to influence the effectiveness of project portfolio management practices. The results highlight that the customer orientation factor in organizational culture influences PPM practices much more than any other factor. Following this, the organizational culture factors ranked in order of influence on project portfolio management practices were team coordination, cultural strength, managing change, and achieving goals.

5. Conclusion

This study has provided valuable insights into the significant impact of organizational culture on project portfolio management practices in the healthcare sector. The study's findings have important implications for healthcare leaders and project managers. By understanding the crucial role of organizational culture in project management, organizations can make informed decisions to cultivate a culture that supports successful project execution. This may involve fostering a customeroriented culture, promoting collaboration and communication, and encouraging adaptability to change. The study's results can also inform the development of training programs and interventions to enhance project management skills and competencies within healthcare organizations. While this study has some limitations, such as the small sample size and the focus on a single healthcare organization in New Zealand, it contributes to the existing body of knowledge by providing empirical evidence of the impact of organizational culture on PPM practices in a new geographical context and industry setting. The findings support the resource-based view of the firm, highlighting organizational culture as a strategic asset that can enhance project outcomes and drive organizational performance.

Future research should replicate this study with a larger, more diverse sample across various healthcare organizations and regions to improve generalizability and deepen insights into the relationship between organizational culture and PPM effectiveness. They could also use qualitative research methodology to offer a more nuanced perspective on the role of organizational culture in shaping project management practices. Investigating the role of potential mediating and moderating factors, such as leadership styles, team dynamics, and organizational structures, could further elucidate the complex relationship between organizational culture and PPM effectiveness. This would provide a more comprehensive understanding of the mechanisms through which culture influences project outcomes.

References

- Ajmal, M. M., & Koskinen, K. U. (2008). Knowledge transfer in project-based organisations: an organisational culture perspective. *Project Management Journal*, 39(1), 7–15.
- Alexandrova, M. (2017). Project portfolio management processes: survey evidence from Bulgarian project-oriented organizations. *Годишник на УНСС*, *I*(1), 73–85.
- Alexandrova, M. (2020). Impact of organisational culture on project portfolio management. Conference paper, Hradec Economic Days, pp. 11–18. Retrieved from: https://doi.org/10.36689/uhk/hed/2020-01-001
- Alsabbagh, M., & Khalil, A. H. A. (2017). The impact of organisational culture on organisational learning (an empirical study on the education sector in Damascus City). *International Journal of Academic Research in Business and Social Sciences*, 7(4), 579–600.
- Azadi, A., Farsani, M. E., Rizi, R. M., & Aroufzad, S. (2013). Relationship between organisational culture and organisational learning among employees in physical education organisations. *European Journal of Sports and Exercise Science*, 2(1), 12–16.
- Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99-120.
- Barney, J. B., & Wright, P. M. (1998). On becoming a strategic partner: The role of human resources in gaining competitive advantage. *Human Resource Management*, 37(1), 31–46.
- Belassi, W., Kondra, A. Z., & Tukel, O. I. (2007). New product development projects: The effects of organisational culture. *Project Management Journal*, 38(4), 12–24.
- Blichfeldt, B. S., & Eskerod, P. (2008). Project portfolio management–There's more to it than what management enacts. *International Journal of Project Management*, 26(4), 357–365.
- Bucăța, G., & Rizescu, A. M. (2017). The role of communication in enhancing work effectiveness of an organisation. *Land Forces Academy Review*, 22(1), 49–57.

- Cameron, K. S. (1988). The conceptual foundation of organisational culture. Working paper no. 544, University of Michigan. School of Business Administration. Division of Research. Retrieved from: https://deepblue.lib.umich.edu/handle/2027.42/35462
- Cameron, K. S., & Quinn, R. E. (2006). Diagnosing and changing organisational culture: Based on the Competing Values Framework. Rev. edition. San Francisco, CA: Jossey Bass.
- Crowther, D., & Lancaster, G. (2012). *Research methods: A concise introduction to research in management and business consultancy*. 2nd edition. Boston, MA: Routledge.
- Elonen, S. and Artto, K. (2003). Problems in managing internal development projects in multi-project environments. *International Journal of Project Management*, 21(6), 395–402.
- El Khatib, M., Kherbash, A., Al Qassimi, A., & Al Mheiri, K. (2022). How can collaborative work and collaborative systems drive operational excellence in project management? *Journal of Service Science and Management*, 15(3), 297–307.
- Genç, K. Y. (2013). Culture as a strategic resource for organisations and an assessment on cultures of Turkish large firms. *Procedia-Social and Behavioral Sciences*, 75, 525–531.
- Hasan, H. (2023). Effect of organisational culture on organisational learning, employee engagement, and employee performance: Study of banking employees in Indonesia. *Problems and Perspectives in Management*, 21(3), 471–482.
- Henrie, M., & Sousa-Poza, A. (2005). Project management: A cultural literary review. *Project Management Journal*, 36(2), 5–14.
- Hofstede, G. (2016). Culture's consequences: Comparing values, behaviors, institutions, and organisations across nations. *Collegiate Aviation Review*, *34*(2), 108.
- Judge, T. A., & Robbins, S. P. (2017). Essentials of organizational behavior. Pearson Education (us).
- Katane, J., & Dube, S. (2017). The influence of organisational culture and project management maturity in virtual project teams. 2nd International Conference on the Internet, Cyber-security and Information Systems (ICICIS 2017), Johannesburg, South Africa. Retrieved from: https://hdl.handle.net/10210/255704
- Kerzner, H. (2002). Strategic planning for project management using a project management maturity model. *John Wiley & Sons*
- Kester, L., Griffin, A., Hultink, E. J., & Lauche, K. (2011). Exploring portfolio decision-making processes*. Journal of Product Innovation Management, 28(5), 641–661.
- Koh, A., & Crawford, L. (2012). Portfolio management: the Australian experience. *Project Management Journal*, 43(6), 33–42
- Larson, E. W., & Gray, C. F. (2011). Project management the managerial process (No. 5). Mc Graw Hill.
- Martin, J., & Siehl, C. (1983). Organisational culture and counterculture: An uneasy symbiosis. *Organisational Dynamics*, 12(2), 52–64.
- Mathew, J. (2007). The relationship of organisational culture with productivity and quality: A study of Indian software organisations. *Employee Relations*, 29(6), 677–695.
- Micán, C., Fernandes, G., & Araújo, M. M. T. d. (2022). Disclosing the tacit links between risk and success in organisational development project portfolios. *Sustainability*, 14(9), 5235.
- Morrison, J. M., Brown, C. J., & Smit, E. V. D. M. (2008). The impact of organisational culture on project management in matrix organisations. *South African Journal of Business Management*, 39(4), 27–36.
- Muneer, M., Khan, N., Awais Hussain, M., Shuai, Z., Khan, A. A., Farooq, R., ... & Tariq, M. A. U. R. (2022). A quantitative study of the impact of organisational culture, communication management, and clarity in project scope on constructions' project success with moderating role of project manager's competencies to enhance constructions management practices. *Buildings*, *12*(11), 18–56.
- Nguyen, L. H., & Watanabe, T. (2017). The impact of project organisational culture on the performance of construction projects. *Sustainability*, 9(5), 781.
- Ojiako, U., Petro, Y., Marshall, A., & Williams, T. (2021). The impact of project portfolio management practices on the relationship between organisational ambidexterity and project performance success. *Production Planning & Control*, 34(3), 260–274.
- Palmer, M. (2002). How an effective project culture can help to achieve business success: establishing a project culture in Kimberly-Clark Europe. *Industrial and Commercial Training*, 34(3), 101–105.
- Patanakul, P., & Milosevic, D. (2009). The effectiveness in managing a group of multiple projects: Factors of influence and measurement criteria. *International Journal of Project Management*, 27(3), 216–233.
- Pennypacker, J., & Cabanis-Brewin, J. (2003). Why corporate leaders should make project portfolio management a priority. *Center for Business Practices*.
- Petit, Y. (2012). Project portfolios in dynamic environments: Organizing for uncertainty. *International Journal of Project Management*, 30(5), 539–553.
- Pinto, J. K. (2000). Understanding the role of politics in successful project management. *International Journal of Project Management*, 18(2), 85–91.
- Piwowar-Sulej, K. (2020). Types of organisational culture in the context of project management methodologies. *Proceedings of the Education Excellence and Innovation Management*: A, 2025.
- Piwowar-Sulej, K. (2021). Organisational culture and project management methodology: research in the financial industry. *International Journal of Managing Projects in Business*, 14(6), 1270–1289.

- Sashkin, M., & Rosenbach, W.E. (1996), Organisational culture assessment questionnaire. Unpublished manuscript, Washington, DC: The George Washington University.
- Schein, E. H. (1990). Organisational culture. American Psychologist, 45(2), 109–119.
- Schein, E. H. (1992). Organisational Culture and Leadership. San Francisco: Jossey-Bass.
- Senge, P. M. (2002). The leader's new work. A Jossey-Bass Reader, 765.
- Sevilla, C. G., Ochave, J. A., Punsalan, T. G., Regala, B. A., & Uriarte, G. G. (1992). Research methods. Manila, Philippines: Rex Book Store.
- Shrestha, N. (2020). Detecting multicollinearity in regression analysis. *American Journal of Applied Mathematics and Statistics*, 8(2), 39–42.
- Suda, L. V. (2007). The meaning and importance of culture for project success. In: PMI® Global Congress.
- Tijhuis, W. (2011). Developments in construction culture research: overview of activities of CIB W112'culture in construction'. *Journal of Quantity Surveying & Construction Business*, 1(2), 66–76.
- Turner, R.J. (1993), The handbook of project-based management: Improving the processes for achieving strategic objectives. London: McGraw-Hill.
- Turner, P. (2020). Critical values for the Durbin-Watson test in large samples. *Applied Economics Letters*, 27(18), 1495–1499.
- Zanfelicce, R. L., & Rabechini, R. (2021). The influence of risk management on the project portfolio success proposal of a risk intensity matrix. *Gestão & Produção*, 28(2).
- Zheng, J., Wu, G., Xie, H., & Li, H. (2019). Leadership, organisational culture, and innovative behavior in construction projects: The perspective of behavior-value congruence. *International Journal of Managing Projects in Business*, 12(4), 888–918.
- Zhenjing, G., Chupradit, S., Ku, K. Y., Nassani, A. A., & Haffar, M. (2022). Impact of employees' workplace environment on employees' performance: A multi-mediation model. *Frontiers in Public Health*, 10, 890400.

Appendix

Appendix A. Questionnaire

Please mark your appropriate opinion among the provided alternatives.

- 1. What is your age?
 - o Less than 20 years
 - o 21-30 years
 - o 31-40 years
 - o 41-50 years
 - o 51-60 years
 - o 61-70 years
 - o 70+ years
- 2. How do you identify?
 - o Male
 - o Female
 - o Gender Diverse
 - o Prefer not to say
- 3. What is your highest education level?
 - No qualification
 - NCEA Level 1 3 or equivalent
 - o Certificate
 - o Diploma
 - o Bachelor's degree
 - o Postgraduate or master's degree
 - o Doctorate
 - Other (please specify)
- 4. How long you have been working in this organization?
 - Less than 2 years
 - o 2-5 years
 - o 6-10 years
 - o 11-14 years
 - o 15-18 years

- o 19-22 years
- o 23-25 years
- o More than 25 years
- 5. What is your current role/designation in your organization?
 - Director
 - o Group Manager
 - Planning & Delivery Manager
 - Application Services Manager
 - Change & Adoption Manager
 - o Project Management Office Lead/Manager
 - o Project Manager Team Lead
 - o Business Analyst Team Lead
 - o Programme Director
 - o Project Director
 - Project Manager
 - o Programme Manager
 - o Portfolio Manager
 - o Solution Design Manager
 - o Business Analyst
 - o Product Owner
 - o Project Coordinator/Project Facilitator
 - Other (please specify)
- 6. Which business function do you work within?
 - Strategy and Investment
 - Clinical Informatics
 - o Sector Digital Channels
 - Integration and Delivery
 - Cyber Security
 - Data Services
 - o Digital Enterprise Services
 - Business Services
 - Other (please specify)

Questions on the influence of Organizational Culture

- 7. How do you think the transition to digital healthcare will impact your daily work routine?
 - o Positively
 - o Negatively
 - o Neutral
 - o Not Sure
- 8. Based on your experience in your current organization, how supportive do you think the organizational culture will be or is in transitioning from conventional healthcare to digital healthcare:
 - Highly Supportive
 - o Supportive
 - o Neutral
 - Unsupportive
 - o Highly Unsupportive
- 9. Consider your present organization's culture to answer the following questions on a scale from "Strongly Disagree" to "Strongly Agree". Mark the most appropriate choice for each question.

Organizational Culture	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Managing Change					
1. This healthcare organization is flexible and adaptable when changes are necessary.					
2. While transitioning to digital healthcare employees feel most change is the result of pressures imposed from higher authority in the organization.					
3. While transitioning to digital healthcare employees have a clear idea of <i>why</i> changes are being made.					

4. While transitioning to digital healthcare employees have a clear idea of <i>how</i> changes are being made.			
5. While transitioning to digital healthcare most employees believe the <i>pace</i> of change is excessive and detrimental to their ability to adapt effectively.			
6. While transitioning to digital healthcare most employees believe the <i>disruption</i> of the change is excessive and detrimental to their ability to adapt effectively.			
7. While transitioning to digital healthcare employees believe they can influence their workplace through contributing their <i>ideas</i> .			
8. While transitioning to digital healthcare employees believe they can influence their workplace through their active <i>participation</i> .			
9. While transitioning to digital healthcare employees believe that during periods of change, they are adequately heard and responded to by leadership.			
Achieving Goals			
10. In this healthcare organization, employees demonstrably link their goals to the broader organizational mission and goals			
11. In this healthcare organization, employees perceive their assigned goals as unrealistic and unachievable.			
12. In this healthcare organization, employees rewarded according to how well goals are achieved.			
13. In this healthcare organization, employees participate in defining specific goals.			
14. In this healthcare organization, the transition to digital healthcare favors aggressive goals for constant improvement.			
15. In this healthcare organization, individuals, teams, and functional areas often have incompatible goals.			
Coordinated Team			
16. In this healthcare organization, teams feel inadequately empowered to make decisions and take actions necessary to fulfill their responsibilities.			
17. While working in teams, employees adopt a "what's in it for us" approach rather than "what's in it for me" approach.			
18. In this healthcare organization, employees lack the interpersonal and technical skills they need to work effectively in teams.			
19. In this healthcare organization, employees have a clear understanding of their roles, responsibilities, and how their work impacts colleagues, teams, and overall organizational functions.			
20. In this healthcare organization, employees believe in working together collaboratively, preferring cooperation over competition.			
21. In this healthcare organization, managers at all levels work together as a team to achieve results for the organization.			
Customer Orientation			
22. This healthcare organization gives the highest priority and support in meeting the <i>needs</i> of customers and patients.			
23. This healthcare organization gives the highest priority and support in <i>solving the problems</i> of customers and patients.			
24. This healthcare organization has policies and procedures that help employees provide services patients need.			
25. In this healthcare organization employees often see customers' and patients' problems as someone else's responsibility.			
26. In this healthcare organization employees are always looking for new ways to better serve customers and patients.			
27. In this healthcare organization employees who best serve customers or patients are more likely to be recognized or rewarded than other employees.			
28. In this healthcare organization, patients with problems about the healthcare services they receive, almost always have their problems resolved.		L.	
Cultural Strength			
29. In this healthcare organization, employees work together to combine their strengths and abilities to achieve goals.			
30. In this healthcare organization, everyone knows and understands organizational objectives and priorities.			
31. In this healthcare organization, employees sometimes compromise company policy and procedures to reach operational goals.			
32. In this healthcare organization, business decisions are mostly based on facts rather than perceptions or assumptions.			
33. In this healthcare organization, employees have access to timely and accurate information about what's really happening in the organization and why.			

24 7 41 1 14 1 1 1 1 1 1 1 1 1 1			
34. In this healthcare organization, employees and managers have shared values about			
how to work together to solve common problems and reach mutual objectives			
how to work together to solve common problems and reach mutual objectives.			

10. Consider your present organization's effectiveness in project, programme, and portfolio management practices on a scale of "Never" to "Always". Mark the most appropriate choice for each question.

Effectiveness of Project, Program, & Portfolio Management Practices	Never	Rarely	Sometimes	Often	Always
Project portfolios are designed to achieve sustainable financial results.					
2. Programmes effectively align multiple projects to achieve organizational objectives.					
3. Projects in the portfolio are designed to have goals that fully match the strategic goals of the organization.					
4. Project goals are adjusted and realigned with changing organizational priorities.					
5. Projects and programmes are ranked in the portfolio based on their strategic prioritization.					
6. Resources are allocated among projects as per the strategic priorities of the organization process.					
7. Resources are allocated efficiently across projects to maximize utilization and minimize bottlenecks.					
 Flexible working arrangements are promoted where employees' work can be completed offsite or in flexible working hours. 					
Project management processes are well-defined and consistently followed.					
10. Project, programme, and portfolio goals are communicated clearly to the team members.					
11. For managing internal and external changes and risks, effective risk management processes are established.					
12. Risk mitigation strategies are in place to minimize the effect of potential threats on project, programme, and portfolio deliverables.					
13. Despite facing risks, managers can effectively run projects and manage portfolios.					
14. Roles and responsibilities are clearly delegated to relevant team members.					
15. Transparent communication is maintained on project portfolio activities, decisions, and outcomes.					
16. Timely updates and insights are provided to senior management to support strategic decision-making.					
17. Opportunities to consolidate, retire, or reprioritize projects are encouraged to be taken to better align with organizational objectives.					
18. Strong leadership is demonstrated to effectively motivate employees to achieve project goals.					
19. Project, programme, and portfolio managers collaborate effectively with teams to ensure alignment with organizational strategy.					
20. The project management office (PMO) or equivalent provides valuable support and guidance to the teams.					
21. Strong relationships within the organization are encouraged to promote trust, communication, and collaboration throughout the project lifecycle.					
22. Employees at all levels are engaged to gather input, feedback, and support for project portfolio decisions.					
23. Projects are often completed on or before their scheduled deadlines.					
24. The performance of projects, programmes and portfolios are regularly monitored and evaluated against predefined metrics.					
25. Feedback mechanisms are in place to gather input and suggestions for continuous improvement in project, programme, and portfolio management practices.					

26. Conflicts are being resolved effectively among employees at all levels to maintain a positive and productive work environment.			
27. Overall, I believe project, programme, and portfolio management practices are effective in achieving project and organizational goals.			

Thank you for taking the time to complete this questionnaire. Your contribution is valuable to this research and will help us gain a better understanding of the effects of organizational culture on project, program, and portfolio management practices in healthcare.



© 2025 by the authors; licensee Growing Science, Canada. This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (http://creativecommons.org/licenses/by/4.0/).