

**TECHNO-STRESS AND ITS IMPACT ON ROLE STRESS AND  
EMPLOYEE PERFORMANCE AMONG GOVERNMENT STAFFS  
OF KATHMANDU VALLEY**

By

**Alina Shakya**

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## **RECOMMENDATION**

## **CERTIFICATION**

## **DECLARATION OF AUTHENTICITY**

I, Alina Shakya, hereby affirm that the Graduate Research Project entitled “Techno-stress and Its Impact on Role Stress and Employee Performance among Government Staffs of Kathmandu Valley” prepared under the supervision of Dr. Govinda Tamang, for the partial fulfillment of Master of Business Administration from School of Management, Tribhuvan University (SOMTU) and submitted at Faculty of Management, Tribhuvan University is my original work and has not been presented elsewhere before.

Date:

Signature

Name: Alina Shakya

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Sincerely,

Alina Shakya

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## **LIST OF ABBREVIATIONS**

ANOVA	Analysis of Variance
EP	Employee Performance
ICT	Information and Communication Technology
IT	Information Technology
MS Excel	Microsoft Excel
RC	Role Conflict
RO	Role Overload
RS	Role Stress
SPSS	Statistical Package for Social Science
TC	Techno-complexity
TO	Techno-overload
TU	Techno-uncertainty

## **EXECUTIVE SUMMARY**

Technostress is nowadays a regular occurrence in daily life, and people at all levels of employment can exhibit its effects. Technostress is a psychological term that describes the experience of pressure and strain on people due to Information and Communication Technology (ICT). An appropriate amount of stress is advantageous and boosts productivity while stress mainly drives to degrade performance of individual and ultimately affects productivity level of organization. The government offices, majorly officers seem to have no adequate skills to cope with advance ICTs. Jobs in these fields tend to be skill-intensive, requiring personnel to keep up with technology advancements as needed for performing well. As a result, these circumstances increase the technostress that employees feel, which in turn affects their behavior, responses, performance, and other organizational aspects.

This research aims to analyze the relationship between technostress and employee performance among government staffs in Kathmandu valley. It also tries to identify the mediating effects of role stress (role overload and role conflict) in the relationship between technostress and employee performance. The study's aims were approached using a descriptive study design. Convenience and referral sampling were utilized as a sampling technique in this quantitative study. Data were gathered using a self-administered closed-end questionnaire. 370 employees in total had participated in the study. The SPSS version 26 was used to analyze and interpret the data that had been gathered. To achieve the goals of the study, both descriptive and inferential analysis approaches were adapted.

From the study, it was observed that there was a significant amount of technostress among government staffs in Kathmandu valley which may have had a negative impact on employee performance. Employee performance is negatively impacted by technostress variables, including techno-complexity, techno-uncertainty, and mediating variable role overload. The study shows that techno-overload and role conflict has no significant relationship with employee performance. Nonetheless, the role overload has a mostly affected employee's ability to accomplish their work. Hence, the role overload had the greatest impact on employee performance

# CHAPTER I

## INTRODUCTION

This chapter provides an overview of the research project, its objectives, and the significance of the study. It also describes the hypothesis used in the research and points out any limitations. The report's remaining sections are organized concisely in the end which highlights the main chapters and their contents.

### 1.1 Background of the Study

When obligations do not align with knowledge as expected, stress is a condition of worry that tests a person's coping mechanisms. Stress originates from an organization's excessive pressure (Agboola & Olasanmi, 2016). The word 'stress' can be defined as physiological state which has The physiological state known as "stress" has a significant impact on how a person responds, adjusts, and deals with the situations, things, and surroundings in which they encounter themselves. This factor has a sometimes favorable, but more often negative, impact on human existence, wellbeing, behavior and health.

Computer systems are now mainstream, at least in modern industry and administration. The cycle of innovation in both software and computer components has accelerated. Every year or so, new software as well as technology platforms are produced, and individuals must adjust with them. In current day and age, the hardware components are also evolving at a faster rate (Ahmad & Amin, 2012). The concern is how individuals react to such constant technological advancement, whether it causes stress, and what practical actions and decisions should be developed to help them cope with it. One of the key psychological issues raised by all of these changes is the risk of errors in very complex interconnected systems. As a result, complexity will be key issue that must be addressed in regard to stress and coping capacities (Hamborg & Greif, 2009).

People nowadays are overly reliant on technology, which is causing a number of physical and psychological problems for them and making them inefficient on both a personal and professional level. Undoubtedly, technology has improved people's lives in terms of comfort and proficiency, but the majority of its users also find it difficult to deal with its adverse implications (Tagurum, Okonoda, Miner, Tagurum, & Bello, 2017). Parasuraman and Alutto

(1984) defined "technostress" is brought on by an inability to adapt to new computing technology in a healthy way. The struggle to accept computer technology and the more specialized type of over identification with computer technology are two separate but connected ways in which it shows itself. Tu et al. (2008) asserted that the staff members feel overloaded with information and are compelled to work more quickly to keep up with the escalating processing demands.

Bringing new technology into the workplace is a multifaceted problem that may be addressed by a variety of specialized disciplines such as project management, strategic planning, and process reengineering. A vital step in effectively implementing a new technology to the workplace is determining who will be influenced directly or indirectly by the change and how. This is a major challenge for businesses as they progressively migrate to data-rich, networked environments, because both the number of people affected and the rate of change will accelerate dramatically (Fisher & Wesolkowski , 1999).

According to Schmitt et al. (2012), employee performance is defined as "what the organization employs one to perform and perform well." Each employee's performance has an impact on the performance of the company, hence every organization is particularly concerned in the factors that affect performance. Tarafdar et al. (2011) studied effects of technostress satisfaction and task performance of 233 ICT users. The study revealed that technostress has negative impact on managers' ability to effectively use ICT. Similarly, Tarafdar et al. (2014) indicated that technology overload, incursion, uncertainty and insecurity have an adverse effect on the employee's behavioral performance. Likewise, Tagurum et al. (2017) investigated the effect of technostress on job performance and coping mechanisms among the academic staffs in Nigeria. The results showed that Technostress was reported by 54.2% of participants, and it significantly decreased 9% of employees' ability to execute their jobs.

The organizational effects of ICT-driven changes manifest themselves in two ways. First, there is a direct effect, as evidenced by changes in the "technical system" caused by ICT, i.e. changes in tasks and processes. Second, changes in the "social system" - that is, roles, reward systems, and authority structures - have an indirect effect. Both of these effects can be significant sources of stress for employees and have a negative impact on individual productivity and performance (Tarafdar et al., 2007).

## **1.2 Statement of the Problem**

Technostress has been a growing problem since then, as companies rapidly adopt new technology and companies roll out new upgrades frequently. In context of Nepalese service sector, it is found that number of research were conducted relevant to this study. But mostly they were mostly related to the job stress and its impact on job performance but no specific research was conducted on technostress and its impacts on job performance. So this study is put forward attempting to fill the existing research gaps.

First this study contributes to the extension of the literature to make up for the lack of research regarding technostress and its impacts on job performance in Nepalese service sector. According to research of Tarafdar et al. (2007), role stress mediated the relationship between technostress and work performance. Technostress is one of the burning issues in the present context. Second, this study is using role stress as mediator between the relationship of technostress and work performance, which will help the organization to avoid technostress among employees and manage the technologies for effective employee's work performance. Therefore, this research might help in understanding and identifying the causes of technostress and its impacts on the role stress and work performance of the employees.

The research attempts to answer the following research questions:

- i. What is the current status of techno stress and employee performance among government staffs of Kathmandu valley?
- ii. To what extent does techno-stress impact employee performance among government staffs of Kathmandu valley?
- iii. Is there mediation effect of role stress (role overload and role conflict) between techno stress determinants and employee performance?

## **1.3 Research Objectives**

The general objective of the study is to determine the impact of techno stress on employee performance among government staffs of Kathmandu valley with determining the mediating effect of role stress.

Specific objectives are:

- To assess the technostress and employee performance among government staffs of Kathmandu valley.

- To analyze the impact of technostress on employee performance.
- To identify how the techno stress and employee performance are mediated by role overload and role conflict.

#### **1.4 Hypothesis**

According to research conducted by Tarafdar et al. (2007), there is an inverse relationship between technostress and performance. In addition, Tarafdar (2011) revealed that technostress significantly lowers job satisfaction, commitment, innovation, and productivity.

There is some research done which provides evidence that there is significant impact of technostress on employee's performance among government staffs of Kathmandu valley.

Technology overload has been linked with a number of unwanted outcomes, such as extreme levels of stress, burnout, and lower performance (Diaz, Chiaburu, Zimmerman, & Boswell, 2012). Alam (2016) argued that modern technology is assumed to enhance employee efficiency, but in reality they are so swamped and overloaded with its applications that it becomes hard to get the job done.

H1: Techno overload has significant impact on employee performance.

Technology compels users to understand various IT functions and makes them feel as though their skills are inadequate (Tarafdar et al., 2007). According to Jena (2015), the techno-complexity significantly and negatively affect employee's job performance.

H2: Techno complexity has significant impact on employee performance.

ICTs stress people out because they have to keep up with how quickly new ICTs are developing. This causes anxiety and pessimism. It was revealed that techno-uncertainty has a negative impact on employee performance (Owusu-Ansah, Azasoo , & Adu, 2016).

H3: Techno uncertainty has significant impact on employee performance.

Technostress perceived by employees is positively related to role stress (Wang & Shu, 2008). The literature examining the connection between technology and organizational roles and structure now includes a new conceptual thread that demonstrates the favorable connections between technostress and role stress (Tarafdar et al., 2007).

H4: Technostress influences role stress.

Technostress has significant effect on role stress. The proximity managers' performance is negatively impacted by the techno-stress creator's role stress (Feng, 2021). Role stress has an adverse influence on performance because it makes it difficult for someone to carry out their duties efficiently, which lowers the quality of their work and their performance. Moreover, it has been linked to other problematic effects (Tarafdar et al., 2007). Hence, role stress has significant impact on employee's performance among government staffs of Kathmandu valley.

H5: Role stress has significant impact on employee performance.

### **1.5 Significance of the study**

The importance of this study lies in its attempt to overcome the problems identified in the problem statement, which will aid in bridging any gaps in prior knowledge. First this study aids in the extension of the literature regarding techno stress and its impact on role stress and employee performance among government staffs of Kathmandu valley. According to research of Tarafdar et al. (2007), role stress mediates the relationship between technostress and employee's performance. Technostress is one of the burning issues of today's world.

Second, this study is using role stress as a mediator between the relationship of technostress and the employee performance among government staffs, which will be great help for the organization and staffs to manage techno stress and enhance employee's productivity. Lastly, this study might help in identifying about the techno stress and the impact of determinants of techno stress variables and employee's performance. The findings from this study could be the basis for further research as well as a source of reference. The study can serve as reference material for other academicians or researchers who would like to investigate further the effects of technological stress on employee performance in different private, public, and governmental sectors.

### **1.6 Limitations of the Study**

Some of the limitations of the study are:

- This study only considered three factors of technostress; other additional determinants of technostress could be taken in the further study.
- Although convenience sampling is adopted to gather the sample,



convenience samples don't generate the representative results.

- Since the study was conducted only within staffs of specific organizations of Kathmandu valley, the sample results do not accurately depict the entire population of Nepal.

## **1.7 Structure of the Report**

This research paper has been divided into three major divisions, each with five chapters.

- Preliminary section
- Body of the report
- Supplementary section

The title page, certification and statement of authenticity, acknowledgement, table of contents, list of tables, list of figures, abbreviations, and executive summary comprise the preliminary section.

The report is divided into five chapters.

### **Chapter I: Introduction**

The first chapter of the study provides a brief overview of the study's topic. It explains what the following research entails and why the project is worthwhile. This chapter presents the broad problem objectives, aids in the introduction of the project subject, and explains why the problem is worthwhile to solve. It also contains subtopics such as the background of the study, statement of the problem, research objectives, hypothesis, limitations, significance of the study.

### **Chapter II: Related Literature and Theoretical Framework**

Similarly, the second chapter includes a literature review as well as a theoretical framework. A literature review comprises a review of empirical studies, research publications, and a thesis or dissertation, as well as an overall scenario of the study that is related to the study's objective.

### **Chapter III: Research Methodology**

Similarly, the third chapter is the research methodology, which describes the tools and strategies used to conduct the research. This chapter covers research design, research strategy, as well as population and sample. This chapter also covers methods for data collection, instrumentation, data analysis tools or software used, and ethical considerations.

#### **Chapter IV: Analysis and Results**

The fourth chapter details the study's analysis and findings. It represents the quantitative data analysis utilizing statistical methods that defines the numerous tables and figures designed to answer the study objectives and research questions. It determines the interaction of dependent, independent, and mediating variables. The following section displays the primary conclusions from data analysis that are predetermined as study objectives.

#### **Chapter V: Discussion, Conclusions and Implications**

The fifth chapter, which presents the overall research findings, includes discussions, conclusions, and implication. Based on the study's conclusion, the appropriate suggestions are then presented. It conveys the findings in a logical and consistent manner in relation to the issue at concern, along with the study's potential areas for further study. In addition to this, references and appendices are included at the end of the GRP report.

## CHAPTER II

### RELATED LITERATURE AND THEORETICAL FRAMEWORK

The theoretical overview of the numerous theories related to technostress, role stress and employee performance are presented at initial section of this chapter. The primary focus of this study is on technostress and its influence on role stress and employee performance. In addition, various empirical reviews are described in this chapter.

#### 2.1 Theoretical Reviews

Theoretical reviews offer insight into the particular topic and purpose of the study as well as a sense of anticipated outcomes that can be further contrasted with actual events.

##### 2.1.1 Technostress

Stress occurs when an individual is unable to appropriately respond to the demands placed by the environment (job in this case) in a specific situation, which are followed by a negative outcome. It is also simply defined as that of an individual's behavioral response to an imbalance between the situation's demand and the individual's response (Cooper, Dewe, & O'Driscoll, 2001). Especially when the individual believes that the work that demands more than the individual's knowledge, abilities, and skills possessed (Tiwari, 2020).

The term "technostress" has been proposed to characterize the condition of psychological and physiological arousal experienced in certain individuals who rely significantly on computers in their jobs. Technostress has been observed to arise when individuals believe their job to be stimulating while also believing that they do not fully master the requisite qualifications (Arnetz, Berg, & Arnetz, 1997). Tarafdar et al. (2007) and other researchers has developed different dimensions of technostress mainly techno overload, techno complexity, techno evasion, techno uncertainty and techno insecurity.

Interruptions caused by ICT may also result in technostress, or stress caused directly or indirectly by ICTs (Kumar, Lal, Bansal, & Sharma, 2013). Technostress caused by ICT-enabled interruptions results in short-term, episodic stress. Short-term episodes of technostress, when combined, can lead to long-term issues (e.g., role stress, decreased productivity, intentions to turnover). Technostress may have a far significant influence on an organization's bottom line if such strains are not controlled. As a result, reducing such stressors in the office might have a long-term influence on the business. Mostly

information systems based concentrate on technostress models that link chronic outcomes (such as job satisfaction) to general stress perceptions such as role stress, which is based on organizational behavior literature (Tu et al., 2008).

### **The Transactional Stress Theory**

The transactional perspective, first proposed by Selye (1956) in his fundamental study on stress, contends that stress is an ingrained, ongoing process in which people interact with their surroundings, form judgments, and deal with problems as they arise (Cooper, Dewe, & O'Driscoll, 2001). The transactional stress viewpoint takes into account the frequency, seriousness, and intensity of the stressful circumstances (stressors), as well as the accessibility of resources that can help people cope with stress, like social support (Smith, 2006). Each stressor is viewed from this angle in the context of the whole stress process. This viewpoint also places more emphasis on the impacts of coping, which, in the short term, can reduce the perception of stress in the mind and body and, in the long run, can lead to people "toughening" and adapting (Aldwin, 2009).

The transactional approach of stress is a foundation for numerous models. In this study, we emphasize the person-environment (PE) fit model, which contends that stress is brought on by either excessive expectations or a lack of resources to satisfy those demands (Cooper, Dewe, & O'Driscoll, 2001). For two reasons, we investigate the PE fit model in the transactional approach of stress. First, it is important to recognize that everyone experiences stress differently. Second, stress is caused by a mismatch between a person's skills and the high pressure put on them or by a person's beliefs and an environment that does not provide enough resources to achieve those values (Ayyagari, Grover, & Purvis, 2011).

Demand in this model includes environmental factors. It refers to the quantity, nature, and perceived workload or overload brought on by the demands themselves (Mullarkey, Jackson, Wall, Wilson, & Grey-Taylor, 1997). The objective demands that are made possible by ICTs and cause people stress are what we refer to as ICT-enabled demand stressors. For instance, a lot of interruptions that aren't task-related can be demand stresses. Stress is brought on by perceived workload or overload pressures that result from having to meet demand (Parasuraman & Alutto, 1984). Particularly, a high workload may cause demands to exceed people's capacities, which leads to sensations of overload (Kushnir & Melamed, 1991).

## **Dimensions of Technostress**

Agboola and Olasanmi (2016) published a study on stress that was relevant to people in computer-related fields. The majority of people who responded to their study agreed that advancements in computer technology increase uncertainty. It has been asserted that "the men and women who plan, manage, and oversee these systems have encountered growing technostress in their work and environs" and that "technostress is not at all likely to dissipate in the foreseeable future." Saganuwan et al. (2015) studied how technological stress affected productivity in two US government agencies. It was found that the five technological stressors of technological overload, technological invasion, technological complexity, technological insecurity, and technological uncertainty all had a significant detrimental influence on individual productivity.

Although the technological revolution has made work faster and more efficient, it was discovered that many employees were uncomfortable with its implementation because it involved uncertainty and change. In addition, because they felt additional stress known as technostress, which may have adverse effects on the organization (Agboola & Olasanmi, 2016). The key conclusion of most of the study was that stress, in particular, may be a negative influence of computer use. So, it was determined that companies and other relevant organizations must take technostress seriously by training their employees. Organizations must provide mechanisms for people to deal with information overload since ICTs may cause instances of overload in work environments (Hang et al., 2022).

### **2.1.2 Role Stress**

Whether it be in one's personal or professional life, each person has a unique function to perform. Employees so take on several roles in their work lives, which are each described as a particular set of duties or responsibilities related to a certain position within an organization. As a result, positions specify how a worker acts within the company (Cooper et al., 2001). When a person is assigned to multiple jobs that conflict with one another, it can be stressful. This is especially true when there is a breakdown in communication or clarity of thought regarding any aspect of a task or obligation or when the requirements for the various activities are incompatible. Role conflict and role overload have been identified as the two main causes of role stress (Kahn et al., 1964).

When someone must perform duties that are incompatible contradictory or incongruently, role conflict (Kahn et al., 1964). It is not unusual for this to occur in an organizational setting

when a person is expected to meet the requirements of multiple roles, each of which has expectations that are in conflict with one another. As a result, it can be very challenging to comply with all of these demands at once (Wang & Shu, 2008).

Role overload is the terminology used when the amount of work or even the level of complexity that has been allotted to a person exceeds his or her ability to accomplish it (Abdel-Halim, 1981). Role overload occurs when a person is expected to execute a role that is too demanding for them to handle. We refer to a situation as qualitative role overload if the job's expectations for the role are too challenging to fulfill. Role overload is also referred as when someone feels overwhelmed by the amount of roles they have been assigned or are expected to perform (Kahn et al., 1964).

Role stress is caused by the combination of these two (role conflict and role overload). Jackson and Schular (1985) conducted a research and found that role stress has a negative impact on performance. Although it severely impairs a person's capacity for task performance, it has also been discovered to be inversely associated to unhappiness, productivity, and work quality (Cooper, Dewe, & O'Driscoll, 2001).

### **Role Theory**

In accordance with the role stress theory, which is grounded on classical role theory, shows that role ambiguity leads to an unfavorable condition (Kahn et al., 1964). Role stress theory bases its main premise on the idea that stress is a direct result of high demand, and that stress is amplified with each demanding role one performs.

The scarcity perspective, a variation on role stress theory, makes the assumption that people have a limited supply of psychological and physical resources to meet their role commitments. Many responsibilities increase the pressure on resources, increasing the likelihood that an individual would run out of resources. In order to lessen role strain, people must make trade-offs (Aryee, Srinivas, & Tan, 2005). The idea that work and family roles have separate responsibilities and obligations, in which the satisfaction of those connected with one job requires the sacrifice of another, is what underlies the trading-off of finite resources (Zedeck & Mosier, 1990). Due to the incompatibility of the roles, this causes role conflict (Kahn et al., 1964).

## **Technostress and Role Stress**

### **Socio-technical Theory**

According to social technical theory, it is only possible to comprehend and enhance the design and performance of any organizational structure if social and technical factors are combined and handled as interdependent components of a complex system. It involves task flexibility and significance. Positive advancement results from this. There are four actors, or interdependent variables: task/role, structure, technology, and people.

According to sociotechnical theory, an organization is a sociotechnical system made up of social and technical elements. The social element is related to the skills, values, behaviors, roles, structure, and reward systems. On the other hand, when we refer to a technological system, we mean the actual work that is done as well as the technology and associated processes.

Individuals' roles within an organization are either connected to the job they undertake directly along with any related technological systems or social systems, such as the hierarchy and structures, with which the individual interacts such as authority, (Kahn et al., 1964). According to Perrow (1967), technology has an impact on organizational roles because it shapes the scope of control, the coordinating mechanism, organizational structures, rules, policies, and procedures, among other things. Roles have been said to be dynamic rather than static, and as technology changes, it gradually shifts from altering jobs and abilities to altering structures and processes (Barley , 1990). Hence, it is possible to say that technology has influence on the roles performed.

The complexity of today's technology may result in role overload because it takes more effort to understand and control the changes (Coklar & Sahin, 2011). It is more difficult for employees to become accustomed to the technology in modern times since it changes so regularly and frequently in unpredictable ways. By the time they do, another shift happens (Parsons et al., 1991). Role stress is brought on by this role overload. Second, the organization anticipates increased production as a result of the use of new technology (Arnetz, Berg, & Arnetz, 1997). Also, as activities must be completed faster, employees are required to work longer hours, which creates role overload and, ultimately, role stress. Finally, because new ICTs can multitask, staff are under increasing pressure to manage

multiple activities at once, which creates the impression that multiple problems are being solved simultaneously. As tasks multiply, more time is needed to complete them, which necessitates longer workdays or weekend hours at the office (Cooper, Dewe, & O'Driscoll, 2001). They lead to increased role stress and role overload. Role stress and technological stress have a positive association, and technological stress and individual productivity are mediated by role stress (Tiwari, 2020).

### **2.1.3 Employee Performance**

Performance, according to Schmitt et al. (2012), is "what the organization seeks one to do, and do effectively." Furthermore, only actions that can be measured, or scaled, are considered to represent performance. He has also put forth a construct that gauges an individual's performance. The researcher describes the performance components in terms of three variables: declarative knowledge, procedural expertise, and motivation.

Declarative knowledge, according to the notion, is the knowing of facts, rules, aims, and oneself. Apparently, it depends on a person's multiple intelligence interactions, skills, personality, preferences, education, training, and experience. Ability to move, self-control, interact with others, think, and use mental and motor skills. While aptitudes, personalities, preferences, education, training, expertise, and 11 aptitude-treatment interactions as well as practice are determinants of procedural knowledge and skills, all procedural expertise and abilities are included. The final aspect of motivation is the choice of action, the intensity of the effort, and the perseverance of the effort (Schmitt et al., 2012).

## **2.2 Empirical Review**

### **2.2.1 Technostress**

Although the field of information and communication technology (ICT) has made amazing strides and greatly benefited human society, mounting evidence points to the "evil side" of ICT for both individuals and companies (Salanova, Llorens, & Cifre, 2013). One significant "dark side" of ICT is technostress (TS), which is described as "stress experienced by end users in companies as a result of their usage of ICT" (Tarafdar, Ragu-Nathan, & Tu, 2008).

Technostress is a term used to describe a condition that affects general wellbeing and is caused by an inability to deal with new computer technologies. It can emerge as a struggle to accept technology or as an over identification with it (Ayyagari, Grover, & Purvis, 2011). It is sometimes described more broadly as any adverse impact which technology has, either



directly or indirectly, on a person's attitudes, ideas, actions, or body physiology (Tarafdar et al., 2007).

Sasidharan (2021) conducted a study among employees of a large size organization with enterprise system. The findings of the study as that there exists technostress among the employees. Especially the female employees had higher level of technostress in the workplace.

Wang et al. (2008) conducted a research among large scale Chinese employees that resulted employees belonging to more centralized companies often perceive high level of technostress whereas the employees from the less centralized or less innovative organization suffer less from technostress.

Similarly, in the survey conducted by Dragano and Lunau (2020), it resulted in there is a linkage between technology and stress and that results in poor mental health such as burnout leading less employee's productivity.

Likewise, In Jakarta, Indonesia, Christian et al. (2020) performed research to determine the factors that contributed to the performance of 228 lecturers under technostress. The findings demonstrated how lecturers' performance in online instruction has mostly been impacted by technological complexity. Yet, other elements including technological overload, technological instability, and technological unpredictability have also impacted their ability to instruct.

Tarafdar et al., (2007) conducted a research among 233 ICT users from two public sector organizations in US. This paper concluded that the use of ICTs has caused technostress in distinctive ways including technology imposed information and work overload, complex technology and fear of uncertain technology.

### **2.2.2 Role Stress as a Mediator**

#### **Technology influences organizational roles**

In the study conducted by Perrow (1967) described the general impact of technology on organizational roles, claiming that technology determines administrative structures, coordinating pathways, span of control, procedures, rule standardization, and degree of centralization/decentralization. Orlikowski (1992) conducted a research among 120 Beta

corporation staffs and outlined how the usage of ICTs create novel approaches to work and new organizational structures, as well as how they alter the individual's position.

Barley (1990) conducted a survey among radiologists and technologists of two radiology departments. It resulted that the role-based approach directly illustrates how skills, tasks, and behaviors shape role relations, and how role interactions, in turn, alter the structure of an organization and occupation.

Nelson (1990) reviewed past studies on technological adjustment and stress with various organizations such as International Business Machines Corporation (IBM) and Aerospatiale Helicopter Corporation and reported that ICTs alter organizational roles by modifying both work and social processes.

### **Technostress and role stress**

Modern ICTs are complicated. According to researchers, complicated technologies are related with role overload since users must work harder to understand and operate them. Because ICTs evolve so quickly, employees rarely become accustomed to one type of application before being compelled to learn another. This leads to "skill disparity", in which present skills are insufficient and people spend a significant amount of time learning how to use new ICTs (Parsons, Linden, O'Conner, & Nagao, 1991).

In the large scale survey conducted by Duxbury and Higgins (2002) of 30,000 Canadians those working for Canada's largest organization, it was reported that the majority of respondents admitted with high levels of role overload. Analysis of the 2001 research suggested that much of this high level in role overload could be concerned with new information and communication technology.

Hang et al. (2022) surveyed 355 employees from private bank in Pakistan that has just introduced a new technological system in its operations. It was found that all of the associated tasks, such as installing or upgrading software, engaging with advanced functionality, add to activity done that does not directly meet one's direct work demand. This causes role stress by increasing role overload. Similarly, (Borle, Reichel, Niebuhr, & Voelter-Mahlknecht, 2021) conducted a study screening 321 articles independently and depicted that techno-stressors were consistently associated with work performance.

Likewise, Ragu-Nathan et al. (2008) conducted a survey on 608 end users of ICTs from different organizations and it showed that users must process input from more people and reconcile a broader range of viewpoints. Role stress is increased as a result of technostress.

### **Role stress and employee performance**

Every employee in a company has a distinct set of duties or obligations that define the position's function within the company. Hence, roles define the parameters of an individual's organizational tasks and dictate how they should operate (Cooper, Dewe, & O'Driscoll, 2001). One's job can become a source of stress when there is a lack of clarity regarding the extent of one's responsibilities, when one is given more roles than one can handle, or when one is faced with expectations that conflict from several areas or different persons. Role stress has long been a topic of considerable study. Role stress is mostly driven by two factors: "role conflict" and "role overload" (Kahn et al., 1964).

Beena (1999) conducted a research on 196 women executives from four different organizations in Alwaye area and found that there is a strong negative relation between role overload and job performance of women executives and significant direct relationship with job stress.

On reviewing the paper related to dependent variable and mediating variable, Tarafdar et al. (2007) surveyed 233 public organizations' staff members in US and found that role stress and employee productivity are inversely related. It means the role overload and role conflict influence the performance of the employees that lessen the productivity in workplace.

Similarly, Veloutsou and Panigyrakis (2004) conducted a research on 125 managers of 33 different companies in Greece and found that the brand managers could feel more stressed as a result of the evolving duties and new commercial requirements associated with their position.

Likewise, Siegall (2000) conducted a study among 56 employees of an electronics or software firm and found that role conflict and ambiguity significantly affect organizational and individual outcomes. In a research conducted by Nygaard and Dahlstrom (2002) among 218 managers of retail oil outlets found that there is non-linear influences of role conflict on organizational effectiveness and employee satisfaction.

Similarly, Jackson and Schular (1985) conducted a study which analyzed 29 correlates of role ambiguity and role conflict from past research and found that role conflict and role ambiguity are usually related to negatively valued states such as absenteeism, turnover, and dissatisfaction among employees.

Furthermore, Tiwari (2020) administered a research among 233 employees of different levels employing in seven different organizations of Delhi and Chandigarh regions. It was found that technostress influences role stress directly and productivity inversely. Further, it also established that technostress affects individual performance via role stress which acts as a mediator as a mediator between technostress and employee productivity. Also, it suggested strategies to cope with role stress which may be used to cope with technostress too.

Moreover, Role conflict appears to be positively correlated with intrinsic satisfaction for managers with little work experience, and vice versa, according to a study conducted by Abdel-Halim (1981) among 89 middle-lower managerial staff from a heavy-equipment manufacturing company.

### **2.2.3 Technostress and Employee Performance**

Fuglseth and Sjørebø (2014) conducted a study among 216 employees of a medium sized local government administration in Norway and found that dissatisfaction among the respondents was very high leading to reduce willingness to extend the use of technology. It resulted the impact of inhibitors on willingness to use ICT and satisfaction level was inversely related.

Likewise, Saganuwan et al. (2015) in their study conducted among 283 accounting staffs using accounting information system exposed to technostress would have a lesser satisfaction with their performance. It showed the linkage of scope and integration to technostress creator and technostress creator to task performance were significant.

In the research conducted by Jena (2015) among 216 teachers of different universities and colleges (Indian academicians), which resulted that there exists negative impact of technostress on job performance among Indian academicians. Agboola and Olanmi (2016) conducted a research adopting secondary data and studies which aimed to identify the impact of technological stress mainly in auditing firms of developing countries. The study found that technostress has a significant negative impact on employee productivity which further

depicts that techno stressors leads to ergonomic hazards, that are detrimental to employees and work place.

Furthermore, in the study conducted by Owusu-Ansah et al. (2016) among 400 bank staffs from four commercial banks in Ghana, stated that technostress has relatively negative pathway to employee performance. It also revealed that when employees are suffered from technological stress then they become victim of sense of anxiety and pessimism as they need to adjust with the pace of new ICTs. Similarly, Kumar et al. (2013) conducted a study among 200 IT professionals and revealed that technostress has a negative relation to job satisfaction and job performance. Moreover, this article concluded that technostress is negatively correlated with organizational commitment. Likewise, Delphechitre et al. (2019) mentioned in their research that update or introduction of new system feature and communication overload increases the stress level of salespeople. That meant such technological stress in sales people results in negative relation to administrative and outcome performance. Igwe and Chukwu (2019) conducted a study among 47 secretaries of business organizations in Abakaliki Capital Territory and found that there was negative association between technostress and job performance of secretaries in organizations. The study also concluded that techno-stress had increased the rate of ill-health of majority of staffs.

## 2.3 Literature Review

**Table 1**

*Summary of Key Literature Review*

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Author(s)	Variables and Methodology	Major Findings
Christian, Purwanto, and Wibowo (2020)	Variables: Techno-overload, Techno-complexity, Techno-insecurity, Techno-uncertainty and Teachers' performance 228 samples from lecturers of private tertiary level in Jakarta. They used SPSS for measuring reliability, validity and regression analysis.	The results revealed that mainly techno-complexity dimension has affected the online teaching performance of those lecturers. On the other hand, other factors including technological overload, technological instability, and technological unpredictability have also had an impact on their ability to teach.
Orlikowski (1992)	Variables: Technology used and organizations Samples: 120 employees of Beta Corporation	This survey determines how the use of ICTs creates new ways of working and organizational structures, in addition to how it affects the individual's position.

Hang, Hussain, Anim, and Abdullah (2022)	<p>Variables: Techno stressors and employee's well being</p> <p>Samples: 355 employees from private banks of Pakistan.</p>	<p>It was discovered that all of the related activities, such as installing or upgrading software or utilizing advanced capabilities, increase the amount of work completed that does not directly address an individual's immediate job need. By creating role overload, this leads to role stress.</p>
Beena (1999)	<p>Variables: Role overload, role ambiguity, Role conflict and impacts on women executives</p> <p>Sample: 319 from four organizations public sectors (manufacturing and consulting) and private sectors (banks)</p>	<p>It was resulted that there is a considerable negative association between employee productivity of women executives and role overload, as well as a direct relationship between job stress and this relationship.</p>
Tarafdar, Tu, Ragu-Nathan, and Ragu-Nathan (2007)	<p>Variables: technostress and individual productivity</p> <p>Mediating variable: role stress</p> <p>Sample: 233 from two public sector organizations in US operating similar</p>	<p>It was found that role stress is increased by technology. Individual productivity is negatively impacted by both technological stress and role stress.</p>

client service pc based  
networked systems

For data analysis,  
Cronbach's alpha and  
structural  
equation modeling (SEM)  
package AMOS was used.

- Tu, Wang, and Shu (2005) Variables: technostress and individual productivity According to the study, technological overload does have a large positive impact on individual productivity, however technological invasion and technological insecurity have a significant negative impact.
- Sample size: 437 Chinese employees
- For data analysis 5-point Likert Scale, multiple regression and Scheffe's test were used.
- Fuglseth and Sørenbø (2014) Independent variables: Technology complexity results in dissatisfaction among employees which further leads to reduce willingness to extend the use of ICT at work. The effect of inhibitors on employee desire to use ICT and employee satisfaction are inversely related.
- technostress, employee satisfactions with ICT use, Moderating variable: technostress inhibitors
- Sample: 216 employees of One medium-sized local government administration in Norway 216 returned.
- Use of Mplus tool and employed covariance Structural Equation Modelling (SEM).



Owusu-Ansah, Azasoo, and Adu, (2016)	<p>Independent variables: gender, age, education, computer efficacy and confidence and experience using computers;</p> <p>Dependent variable: techno-stress and staff satisfaction and commitment to the bank; and intervening variable: support from administrators, end user training and stakeholder-user. Sample comprises four commercial banks in Ghana with sample size of 400. Quota-sampling technique; SPSS was used to create tables, chi-squares, correlation and t-test of some variables.</p>	<p>It was shown that technological stress has a detrimental effect on employee performance because ICTs cause mental pressure, a feeling of worry, and pessimism since they require them to keep up with the quickly growing pace of new ICTs.</p>
Delphechitre, Black, and Farrish (2019)	<p>Variables: technology overload and administration performance and outcome performance</p> <p>Moderating variables: technology self-efficacy</p> <p>Sample: 200 salespeople at a national company providing services to small and medium companies</p> <p>Structural equation model</p>	<p>System feature, information and communication overload increase stress levels. and has negative relationship with administrative performance and outcome performance.</p>

was used to analyze the data.

<p>Ngozi, Ugochukwu, and Ebuka (2018)</p>	<p>Variables: Information overload and Job satisfaction</p> <p>Sample: 260 employees from selected deposit money banks in Anambra State</p> <p>Test Retest approach, Pearson's Product Moment Correlation Coefficient.</p>	<p>The results of this study found that there is a significant positive relationship existing between information overload and job satisfaction of the employees in the focused firms.</p>
<p>Igwe and Chukwu (2019)</p>	<p>Variable: Technostress and job performance</p> <p>Cronbach's alpha, mean, standard deviation, t-test were used for data analysis.</p>	<p>The study demonstrated how technological stress had a detrimental impact on employee performance. It was also discovered that the majority of the staff are sicker now than they were before technological stress.</p>

## 2.4 Research Gap

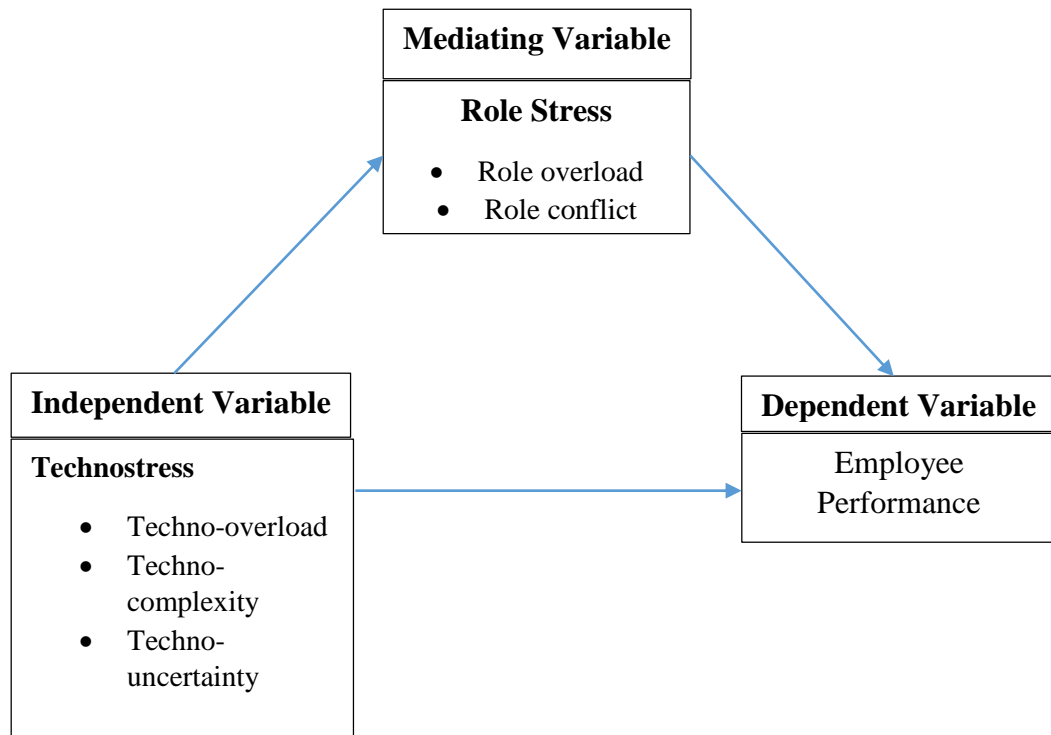
Following a thorough review of relevant literature, we could identify few research gaps. It was found that majority of technological stress related research had a purpose to analyze the impact of techno stress on employee performance and we could hardly find the mediation effects of role stress in relationship between techno stress and employee performance in context of Nepal.

Hence, the findings of the current research would help in further research concerned to the techno stress and employee performance.

## 2.5 Theoretical Framework

**Figure 1**

*Theoretical Framework*



Source from: (Tarafdar, Tu, Ragu-Nathan, & Ragu-Nathan, 2007)

Figure 1 illustrates the conceptual framework for the research study. From the figure, the dependent variable is employee performance, independent variables are techno overload, techno complexity, and techno uncertainty and mediating variables are role overload and role conflict.

## 2.6 Operational Definition of Variables

### **Technostress**

Technostress is a phenomenon that negatively impacts overall wellness and is brought on by an inability to adapt to new computing technology. It may manifest as a fight with technology acceptance or as an over identification with it (Ayyagari, Grover, & Purvis, 2011). Technostress is a generalized feeling of anxiety that has a detrimental effect on a person's ideas, behaviors, attitudes, and physique when they are required to use technology (Tagurum et al., 2017).

### **Techno-overload**

Techno overload is a term used to describe stressful events that cause people to work more and faster than usual. It can force workers to handle a tremendous amount of information, which can cause fatigue, memory problems, and loss of control (Ragu-Nathan, Tarafdar, Ragu-Nathan, & Tu, 2008) .

### **Techno-complexity**

Techno-complexity is the condition of feeling a lack on employee's computing skills which make them spend more time adapting and learning the new technology (Tarafdar, Pullins, & Ragu-Nathan, 2014).

### **Techno-uncertainty**

Techno-uncertainty is the condition where the users of ICTs feel hesitant and disturbed due to the regular installing and upgrading of technology (Ahmad & Amin, 2012).

### **Role Stress**

Role stress can be defined as the condition when there is a lack of clarity regarding the scope of one's obligations, when one is assigned excess roles than one can handle, or when one is confronted with contradictory requirements from different aspects or from different people, one's role becomes the source of stress (Kahn, Wolfe, Snoek, & Rosenthal, 1964).

### **Role overload**

Role overload, a situation at work where people believe their role expectations exceed their time, energy, and talents which is becoming more prevalent and is costing both employees and businesses significantly (Fisher & Wesolkowski , 1999). Role overload is linked to a variety of detrimental effects, including mental stress, turnover intention, a lack of organizational commitment and poor work performance (Beena, 1999)

### **Role conflict**

Role conflict is a work situation that occurs when employees are given multiple, incompatible roles at once or when their job overlaps with that of another employee or work group. An individual is more likely to experience stress at work if there is more role conflict (Tiwari, 2020).

## **Employee Performance**

Employee performance refers to an employee's capacity to provide work, products, and services that are on par with, better than, or above the minimum standards set by their employers. Also, the assessment of the quantity and quality of work produced while taking into account the expense of resources (Schmitt et al., 1990).

## CHAPTER III

### RESEARCH METHODS

This chapter discusses the research methodology used to investigate the impact of the independent variable (technostress) on the dependent variable (employee performance) among government staffs of Kathmandu valley and assessing indirect impact of mediating variable (role stress). The chapter comprises methods of sample selection, gathering data, and interpreting it.

#### 3.1 Research Design

The research design acts as a guide for doing research and determines the type of knowledge generated by the investigation. The descriptive research design was adopted for this research. The research adopted primary source of data collection. Also, quantitative research strategy has been applied. The data were collected using structured questionnaire distributed through online mediums and also printed forms.

#### 3.2 Population and Sample

The major target demographic for this study was all the employees ranking as officer as well as below officer level working in government offices within Kathmandu valley. The non-probability convenience sampling method was used for data collection. The population size is unknown; the sample size is derived by the number of samples needed to estimate a proportion with an approximate 95% confidence level, which yields a sample size of 384 (Godden, 2004).

$$n = Z^2 * p * (1-p) / M^2$$

Where,

n. = sample .size .for infinite .population

Z = Z.value (for e.g. 1.96 for 95% confidence level)

p = Population.proportion (expressed as decimal and assumed as 0.5)

M = Error Margin i.e. 5%

As a result, the sample size generated by this formula is 384, which constitutes the sample size for this study. However, only 370 responses were gathered, resulting in a response rate of 96.33%, which is considered appropriate for this research.

### **3.3 Sampling Technique Source of Data**

This study is based on convenience sampling and primary data which was collected through a self-administered questionnaire responded by the government staffs of Kathmandu valley. Convenience sampling and referral sampling were undertaken for the study. For faster and easier data collection, researcher selected referral sampling. Convenience sampling was used as it is a non-probability sampling and low-cost technique where subjects are easily to contactable and available. The researcher had limited time period for research. For which convenience sampling method was found to be perfect method of sampling.

### **3.4 Source of Data**

Primary source of data collection was used for the study. The questionnaire was prepared and distributed by the researcher through online form via Google form as well as printed form. The printed questionnaire was distributed by researcher visiting all possible government offices of Kathmandu valley. The questionnaire was fully structured with 9 demographic questions and other 33 questions were in 5-point Likert scale that means they were in the form of statements and respondents has to choose one among strongly disagree, disagree, neutral, agree, and strongly agree. Likewise, books, journals, internet, articles were used for reviewing literatures.

### **3.5 Data Instrument and Measurement**

The questions related to all the dependent, mediating and independent variables were mapped to 5-point Likert scale with five different options. The questionnaire was filled by the government employees only.

#### **3.5.1 Technostress scale and Role stress scale**

The questionnaire (23 items) for the dimensions of technostress and role stress (Techno-overload (TO), techno-complexity (TO), techno-uncertainty (TU), role overload (RO), role conflict (RC) was adopted from the research study conducted in US among employees of two public sector organization by Monideepa Tarafdar, Qiang Tu, Bhanu S. Ragu-Nathan, and T.S. Ragu-Natha where the researchers found that this factor has a major impact on employee's performance (Tarafdar et al., 2007). All items are rated on a 5- points scale ranging from 1 (Strongly disagree) to 5 (Strongly agree).

### 3.5.2 Employee Performance scale

The questions related to employee performance comprises of 10 items used for analyzing their performance regarding technostress. These items were adopted from the questionnaire developed from the article based on short version of self-assessment scale of job performance (Andrade, Queiroga, & Valentini, 2020). All items are rated on a Likert scale ranging from strongly disagree to strongly agree.

### 3.6 Reliability and validity

Reliability analysis contributes to the validity and precision of the researcher's interpretation of the data. The reliability of the data provided in an examination or research study must be determined using high-quality tests. Cronbach Alpha was used to evaluate the data's reliability. In this scale, a value greater than 0.70 is typically regarded as reliable. A pre-test of 40 respondents was conducted to assess the reliability of the questionnaire and the research variables.

**Table 2**

*Cronbach's Alpha*

Variables	Number of Items	Cronbach's Alpha
Techno overload	5	0.707
Techno complexity	5	0.855
Techno uncertainty	4	0.728
Role overload	5	0.706
Role conflict	4	0.700
Employee performance	10	0.782

Table 2 enumerates the variables employed in the study, as well as their Cronbach's alpha. The table reveals that the reliability statistics for Techno overload, Techno complexity, Techno uncertainty are 0.707, 0.855, and 0.728 respectively. The techno overload and techno complexity contains five items each. The techno uncertainty contains four items. Role overload had a Cronbach's alpha 0.706 with five items, and Role conflict had a Cronbach's alpha of 0.700 with four items. Employee Performance, on the other hand, contains 10 items with reliability statistics of 0.782. Thus, the results for the various variables and components



fall within the permissible range of the Cronbach's Alpha, indicating an acceptable level of reliability.

### **3.7 Pilot Study/ Testing**

For the study, we did pilot study on 50 respondents and all of them were government staffs from Kathmandu valley. Then Cronbach's alpha was calculated from the obtained respondents' data for reliability test. It was found that all the variables had Cronbach's alpha larger than 0.7 which means the questionnaire was relevant and reliable and supervisor gave an approval for further research. Finally, the questionnaire was distributed among the respondents.

### **3.8 Data Management and Analysis Tools**

The primary data source was analyzed, evaluated, and verified using a variety of statistical methodologies and tools. The primary data analysis and subsequent statistical analyses on the data were performed using IBM SPSS Version 26. The collected results and interpretations were written down and presented in Microsoft Word. This study's data analysis may be separated into two types: descriptive analysis and inferential analysis. For descriptive analysis, frequencies, percentage, and mean analysis were utilized. Multiple regression and correlation analysis are used for inferential analysis.

For reliability test, Cronbach's alpha was calculated. Shapiro-Wilk test was used for the normality testing of the data. Further, The Kaiser-Mayer-Olkin and Barlett's Test of Sphericity were assessed for the further factor analysis. To examine the association between the two variables correlation analysis was undertaken. The regression analysis was exercised to determine the strength of the association between dependent and independent variables. The Sobel test was operated for examining the mediation effects in between independent and dependent variable.

## CHAPTER IV

### ANALYSIS AND RESULTS

This chapter consists of the data analysis and explanation of results obtained from the current research study. The obtained data are analyzed and presented on the tables and figures with mean and standard deviation. Also, this chapter includes the correlation analysis, regression analysis, and residual analysis. The study uses SPSS for the evaluation and assessing of the research hypotheses. At the last, it includes the major findings which covers all the description involving respective data of descriptive statistics, correlation analysis, and regression analysis.

#### 4.1 Demographic Profile of Respondents

**Table 3**

*Demographic Profile of Respondents*

	Demographic	Frequency	Percentage
Age in years	20-29	64	17.3
	30-39	163	44.1
	40-49	107	28.9
	50 and above	36	9.7
Gender	Male	218	58.9
	Female	152	41.1
Marital status	Married	305	82.4
	Unmarried	64	17.3
	Prefer not to say	1	0.3
Your permanent residence	Province No. 1	31	8.4
	Madesh Province	25	6.8
	Bagmati Province	152	41.1
	Gandaki Province	53	14.3
	Lumbini Province	90	24.3
	Sudurpashchim Province	19	5.1
Educational Status	Intermediate level +2	4	1.1
	Bachelors	96	25.9
	Masters and above	270	73
Years of work experience	Less than a year	17	4.6
	1-10 years	144	38.9
	10-20 years	149	40.3
	20 years and above	60	16.2
Name of the organization	Department of Industry	12	3.2
	Citizen Investment Trust	47	12.7
	Nepal Telecom	102	27.6
	Nepal Planning Commission	8	2.2
	Civil Aviation of Authority	6	1.6

	Nepal Rastra Bank	58	15.7
	Rastriya Banijya Bank Limited	79	21.4
	Rastriya Beema Sansthan	31	8.4
	Agriculture Development Bank Limited	27	7.3
Rank/ Designation	Officer level/ Gazetted Officer	236	63.8
	Below officer/ Non-gazetted Officer	134	36.2
Years of work experience in current organization	Less than a year	27	7.3
	1-10 years	156	42.2
	10-20 years	139	37.6
	20 years and above	48	13

Table 3 illustrates the demographic data of the respondents. Here, the respondents are the government staffs of Kathmandu valley. The table shows that there were 370 respondents in total with 218 (58.9%) male and 152(41.1%) female. Most of the respondents belong to the age group of 30-39 years (44.1%) followed by the age group of 40-49 years (28.9%) and rest lies on 20-29 years (17.3%) and least on 50 and above years (9.7%).

Mostly the staffs surveyed were married (82.4%) and 17.3% were found to be unmarried. Majority of staffs surveyed were found to be the permanent residence of Bagmati province (41.1%), followed by Lumbini province (24.3%), then Gandaki province (14.3%), then Province no. 1 (8.4%), Madesh province (6.8%) and 5.1% belong to Sudurpashchim province. More than half respondents were found to have a master's degree (73%) and 25.9% had a bachelor's degree.

Furthermore, the data depicts 149 (40.3%) respondents had been working since 10-20 years as a whole, 38.9% had been working since 1-10 years, 16.2 % had been working for 20 years and above and very few 4.6% of total respondents lie on the category of less than one year working experience. The majority of the respondents surveyed i.e. 102 (27.6%) are currently working for Nepal Telecom, followed by Rastriya Banijya Bank (21.4%), then by Nepal Rastra Bank (15.7%), Citizen Investment Trust (12.7%), Rastriya Beema Sansthan (8.4%), Agricultural Development Bank (7.3%), Department of Industry (3.2%), Nepal Planning Commission (2.2%) and Civil Aviation of Authority (1.6%).

In terms of rank or designation of the respondents, most of the respondents (63.8%) were officer level or gazetted officer and rest (36.2%) were of below officer level or non-gazetted

officer. The data shows that the most of the respondents have been working in the current organization for 1-10 years (42.2%), followed by 10-20 years (37.6%), 20 years and above (13%) and less than a year (7.3%).

## 4.2 Descriptive Statistics of Independent Variables, Mediating Variables, and Dependent variables

**Table 4**

*Descriptive Statistics of Technostress*

Statement	Items	Mean	SD
I am forced by new technology to work much faster.	TO1	3.24	1.160
I am forced by new technology to do more work than I can handle.	TO2	3.48	1.082
I am forced by new technology to work with very tight time schedules.	TO3	3.41	1.099
I am forced to change my work habits to adapt to new technologies.	TO4	3.36	1.104
I have a higher workload because of increased technology complexity.	TO5	3.32	1.144
<b>Techno-overload</b>		<b>3.364</b>	<b>0.759</b>
I do not know enough about new technology to handle my job satisfactorily.	TC1	2.93	1.074
I need a long time to understand and use new technologies.	TC2	2.97	1.085
I do not find enough time to study and upgrade my technology skills.	TC3	3.26	1.138
I find new recruits to this organization know more about computer technology than I do.	TC4	3.87	0.919
I often find it too complex for me to understand and use new technologies.	TC5	2.87	1.105
<b>Techno-complexity</b>		<b>3.181</b>	<b>0.848</b>
There are always new developments in the technologies we use in our organization.	TU1	3.62	0.95
There are constant changes in computer software in our organization.	TU2	3.56	0.981
There are constant changes in computer hardware in our organization.	TU3	3.26	1.046
There are frequent upgrades in computer networks in our organization.	TU4	3.63	0.975
<b>Techno-uncertainty</b>		<b>3.520</b>	<b>0.733</b>

Table 4 depicts descriptive statistics of Technostress with the use of numbers of items. The study focuses on three different dimensions of technostress including techno-overload, techno-complexity, and techno-uncertainty. Each dimensions are measured using multiple items and lastly the overall average and standard deviation of the technostress scale is computed.

Starting with the first dimension of technostress which is techno-overload, the mean response is 3.3649 and SD of 0.75909. This indicates average respondents surveyed are seemed to be neutral about whether they have experienced techno-overload in their workplace. This means most of the employees of government offices are forced by new technology to work more and much faster. It seems with development of ICTs they had to work in tight schedules and experienced workload and complexity.

Likewise, the second dimension of technostress is techno-complexity. The overall mean score of the techno-complexity is 3.1811 and SD of 0.84838. Hence, it means that on an average, the majority of respondents surveyed are neutral as to whether they have experienced techno-complexity or not. It seems that most of the employees had somewhat experienced complexity while adopting new technology. Mostly, it seems that the employees felt difficulty in understanding and using the new system and even they felt like they didn't have much time to study and upgrade their skills.

Furthermore, the third dimension of technostress focused on this study is techno-uncertainty. The total mean response of techno-uncertainty is 3.5203 and SD of 0.73339. It shows that most of the respondents agree on installing and upgrading of hardware, software, and networking has caused stressful situation in the workplace. The employees of government offices tend to have faced technostress due to due to frequent changes in technologies, computer software, hardware and networking. The reason behind such situation could be lacking of technical skills. It seems that organization needs to conduct training and development programs and advanced classes to the employees before operating or implementing new technologies in the workplace.

**Table 5***Descriptive Statistics of Role Stress(RS)*

Statement	Items	Mean	SD
I often have to do more work than I can handle.	RO1	3.29	1.074
I am often required to do difficult tasks.	RO2	3.31	0.984
I often work beyond actual or official working hours.	RO3	3.18	1.035
I often attend to many problems or assignments at the same time.	RO4	3.57	1.013
I never seem to have enough time to do my actual work.	RO5	3.56	0.992
<b>Role overload</b>		<b>3.383</b>	<b>0.691</b>
I am often asked to do things that are against my better judgment.	RC1	3.55	1.056
I often receive an assignment without adequate resources and materials to execute them.	RC2	3.54	0.957
I often have to bend rules or policy in order to carry out an assignment.	RC3	3.36	1.126
I often receive incomplete requests from two or more people.	RC4	3.48	1.067
<b>Role conflict</b>		<b>3.483</b>	<b>0.763</b>

Table 5 exhibits the descriptive statistics of the mediating variable of the study that is role stress (RS) which further includes two variables role overload (RO) and role conflict (RC). The table has explained the mean score and SD of the items of role stress. It includes 9 different items in total.

The overall mean deviation of role overload is 3.3838 and SD of 0.69122. It means that on an average, the respondents are neutral as to whether they are facing role overload or not. It shows that the government staffs of Kathmandu valley somewhat tend to have no enough time for them to perform their actual work and have work burden. The overall mean score of role conflict is 3.4831 and SD is 0.76346. This may imply that majority of respondents are agreed about them experiencing the role conflict in their workplace which could eventually have negative impact on employee performance.

**Table 6***Descriptive Statistics of Employee Performance (EP)*

Statement	Items	Mean	SD
I perform hard tasks properly.	EP1	2.97	0.485
I try to update my technical knowledge to do my job.	EP2	2.85	0.872
I do my job according to what the organization expects from me.	EP3	2.76	0.914
I plan the execution of my job by defining actions, deadlines and priorities.	EP4	2.89	0.880
I plan actions according to my tasks and organizational routines.	EP5	2.86	0.861
I take initiatives to improve my results at work.	EP6	2.98	0.791
I seek new solutions for problems that may come up in my job.	EP7	2.94	0.768
I work hard to do the tasks designated to me.	EP8	2.91	0.831
I execute my tasks foreseeing their results.	EP9	2.84	0.877
I seize opportunities that can improve my results at work.	EP10	2.85	0.944
<b>Employee Performance</b>		<b>2.886</b>	<b>0.482</b>

Table 6 shows the descriptive statistics of dependent variable of the study which is employee performance. The overall mean response of the dependent variable employee performance is 2.8862. This depicts on an average, majority of respondents are neutral about their performance which means they couldn't justify their performance status.

**4.3 One sample t test****Table 7***One sample t test of variables*

	Test Value = 3			Mean Difference
	t	df	Sig. (2-tailed)	
Techno overload	9.246	369	0	0.36486
Techno complexity	4.106	369	0	0.18108
Techno uncertainty	13.646	369	0	0.52027
Role overload	10.68	369	0	0.38378
Role conflict	12.172	369	0	0.48311
Employee performance	-4.533	369	0	-0.1138

Table 7 illustrates mean differences of all the independent, mediating and dependent variables with the test value 3. The table presents the similar findings just as the descriptive statistics analysis of each of the variables.

#### 4.4 Normality Test

**Table 8**

*Shapiro-Wilk Test*

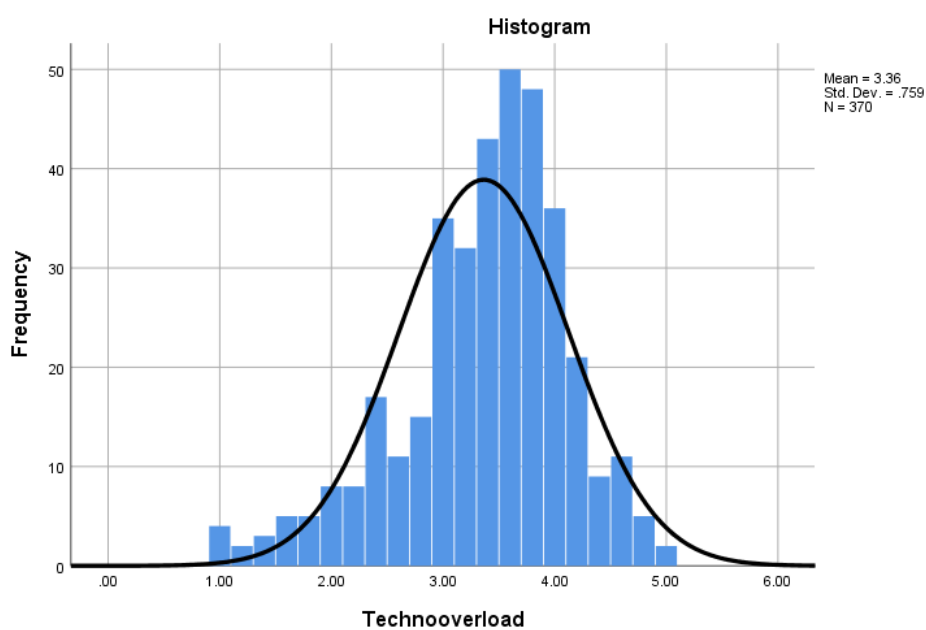
	Shapiro-Wilk		
	Statistic	Df	Sig.
Techno-overload	0.956	370	0.000
Techno-complexity	0.987	370	0.002
Techno-uncertainty	0.952	370	0.000
Role overload	0.976	370	0.000
Role conflict	0.956	370	0.000
Employee performance	0.901	370	0.000

Table 8 depicts the Shapiro-Wilk test that examine the normality of the data. It determines if the research data are normal or not. The data obtained from the table illustrates that the test is significant and data are not normally distributed.

#### 4.5 Normality Curve

**Figure 2**

*Normality of Techno overload*

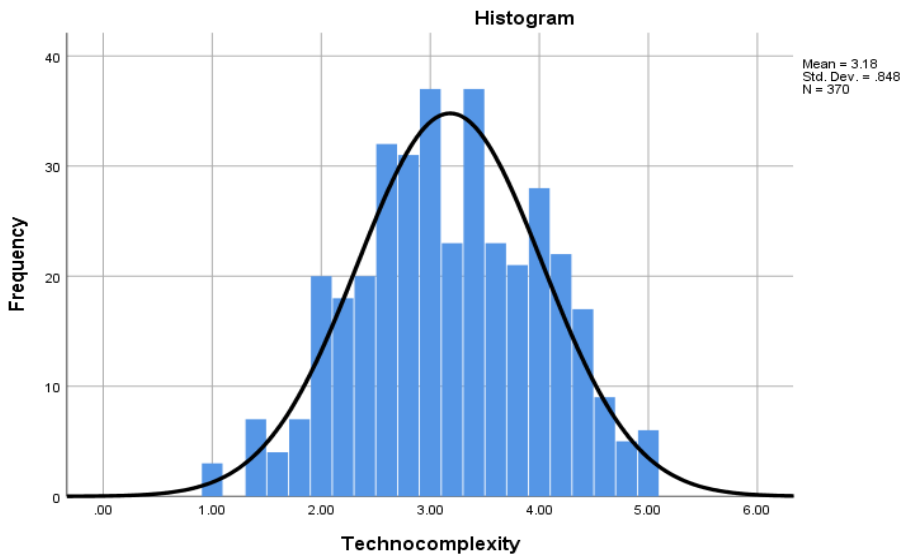




The figure 2 illustrates that the data are not normally distributed. From the histogram, it exhibits that some of the data are seemed to be above the normality curve and rightward skewed.

**Figure 3**

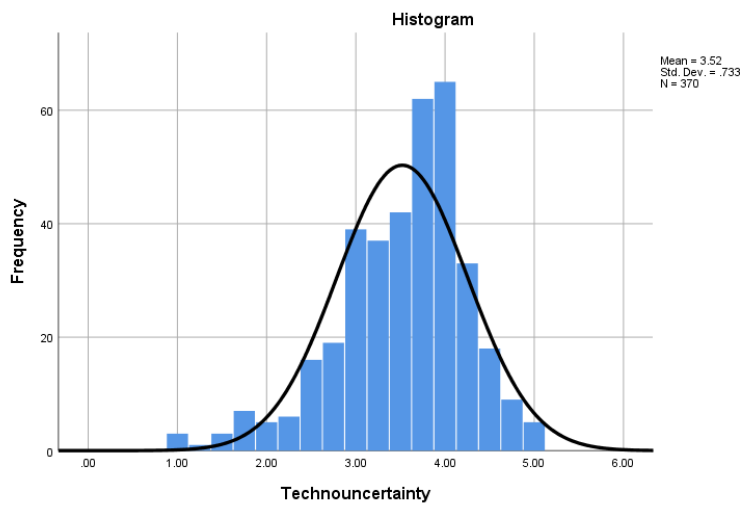
*Normality of Techno complexity*



The figure 3 exhibits that the techno complexity data is seemed to be bell shaped and centered but it is not normally distributed as some of the obtained data are seemed to be over the normality curve.

**Figure 4**

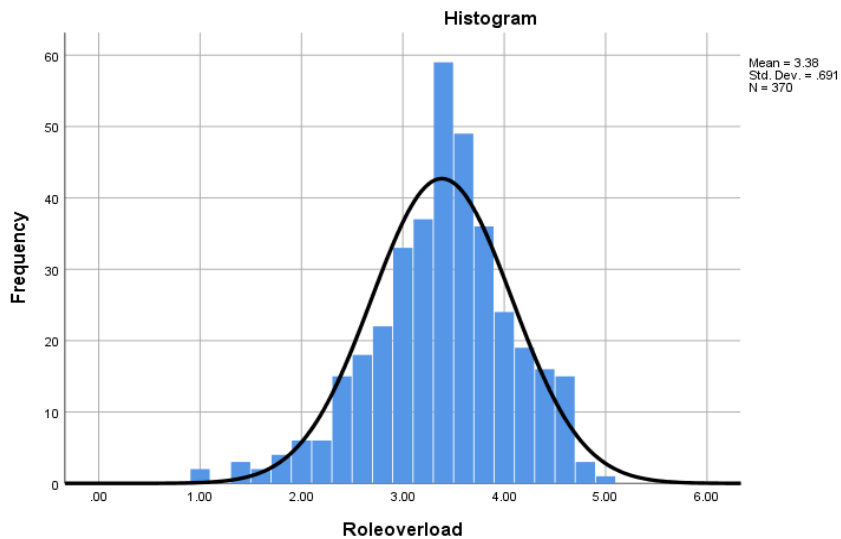
*Normality of Techno uncertainty*



The figure 4 represents that techno uncertainty data are not normally distributed. Some of the data are seemed to be over the normality curve and are right skewed.

### Figure 5

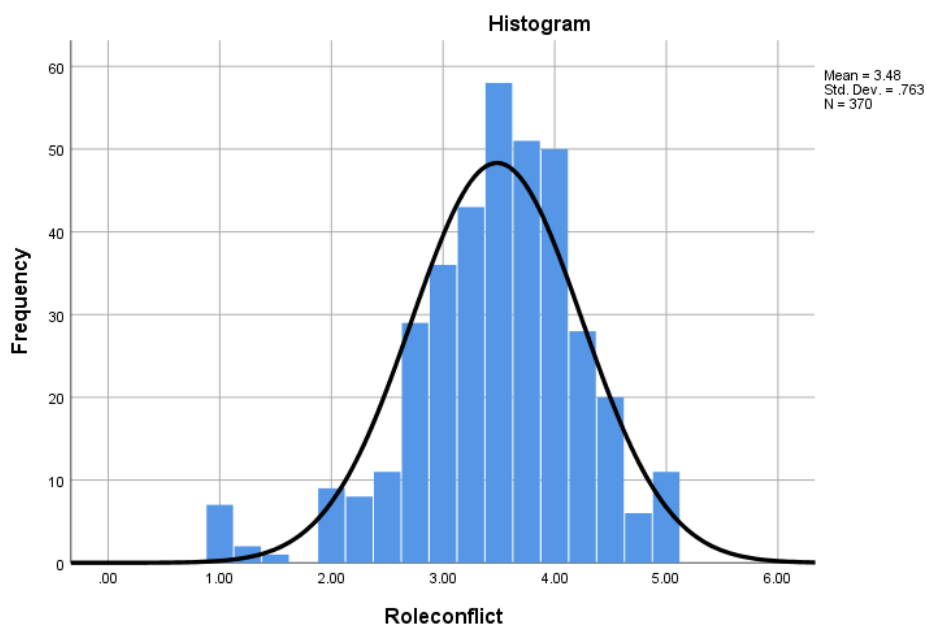
*Normality of Role overload*



The figure 5 shows the normality curve for role overload which seems to be almost bell shaped but some are found to be over the normality curve and it is skewed towards right.

### Figure 6

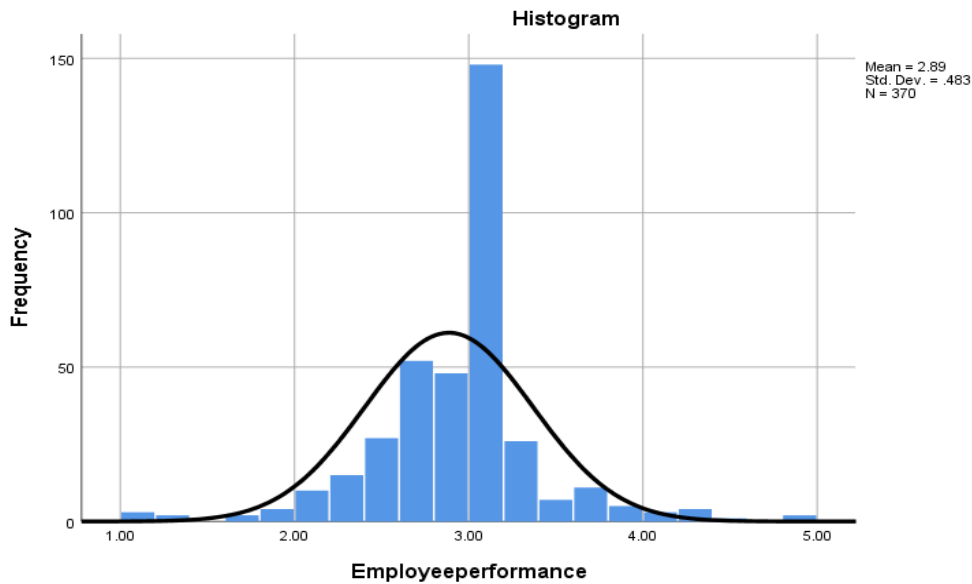
*Normality of Role conflict*



The figure 6 illustrates the data of respondent for role conflict are not normally distributed. It shows that some of the data are over the normality curve and are skewed towards right.

**Figure 7**

*Normality of Employee performance*



The figure 7 illustrates that the data are not normally distributed. It exhibits that the data are right skewed.

#### **4.6 KMO's and Bartlett test**

KMO examines the level of sampling adequacy and determine whether or not the data can be used for factor analysis. The value of KMO ranges from 0 to 1. If the value is greater or closer to 1 then higher the significance or data and factor analysis can be done. Whereas, the population correlation matrix's variables are analyzed using the Bartlett's test of sphericity to determine whether the null hypothesis is true. KMO's and Bartlett test of five variables are presented in table 9.

**Table 9**

*KMO's and Bartlett test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.740
Bartlett's Test of Sphericity	Approx. Chi-Square	615.875
	Df	15
	Sig.	0.000

The KMO measure of sampling adequacy should be greater than 0.5 for a satisfactory test and valid for further factor analysis. Table 9 illustrates that the KMO measure is 0.740, which is greater than 0.5 and therefore, proves that the test is satisfactory.

#### Multi-collinearity

When independent variables in a regression model are correlated, multi-collinearity occurs. This correlation between independent variables shows a problem because independent variables should be independent. If there is high level of correlation between variables, it can cause problems while fitting the model and at the time of interpretation. Multi-collinearity test is measure using VIF values which is presented in table 10.

**Table 10**

*Variance Inflation Factor (VIF)*

Model	VIF
Techno-overload	2.179
Techno-complexity	1.454
Techno-uncertainty	1.238
Role overload	1.320
Role conflict	2.033

Table 10 shows the VIF values and shows whether there exists multi-collinearity with VIF. The table illustrated there is no multi-collinearity between the independent variables as all six VIF values is less than 3.

## 4.7 Correlation Analysis

**Table 11**

*Correlation Matrix*

	EP	TO	TC	TU	RO	RC
EP	1					
TO	-.228**	1				
TC	-.382**	.508**	1			
TU	-.305**	.293**	.347**	1		
RO	-.435**	.327**	.317**	.345**	1	
RC	-.280**	.681**	.369**	.290**	.416**	1

### **Relationship between Techno overload and employee performance**

The employee performance and techno overload have weak negative association, according to Pearson correlation ( $r=-0.228$ ,  $p<0.05$ ). The significance value 0.00 shows the strong evidence that the variables are linearly correlated. Thus, techno overload tends to decrease employee performance.

### **Relationship between Techno complexity and employee performance**

With the Pearson correlation of ( $r=-0.382$ ,  $p<0.05$ ), the employee performance and techno complexity also shows that there is weak negative relationship between these variables. The significance value 0.00 shows the strong evidence that the variables are linearly correlated. Thus, techno complexity tends to decrease employee performance.

### **Relationship between Techno uncertainty and employee performance**

The Pearson correlation of ( $r=-0.305$ ,  $p<0.05$ ) depicts that the employee performance and techno uncertainty have weak negative association. The significance value less than 0.05 is the evidence that these variables are linearly correlated to one another and have weak negative correlation. Thus, techno uncertainty tends to decrease employee performance.

### **Relationship between role overload and employee performance**

According to the Pearson correlation from the table ( $r=-0.435$ ,  $p<0.05$ ), it shows moderate negative relation between the variables role overload and employee performance. Its significance value 0.00 which is less than level of significance defines that these variables are linearly correlated and have negative correlation. Thus, role overload tends to decrease employee performance.

### **Relationship between role conflict and employee performance**

Pearson correlation of ( $r=-0.280$ ,  $p<0.05$ ) indicates weak negative association between role conflict and employee performance. With the less significance value of 0.00, it proves there exists linear correlation between these variables and are negatively associated. Thus, role conflict tends to decrease employee performance.

### **4.8 Regression Analysis**

A multivariate linear regression model was used in this study. The regression analysis comprises of the three different sections and they are the Model Summary, ANOVA, and Coefficients. The model summary section shows the R-squared and modified R-squared, which are essential for assessing the variance in dependent variables caused by or explained by the independent variable.

In the ANOVA section, it presents if the null hypothesis is either accepted or rejected. None of the independent variables may be used to predict the dependent variable, if the null hypothesis is correct. If the F-test is larger than 0 and the p-value is less than 0.05, the null hypothesis is invalidated and the regression model is assumed to be a perfect fit for the data.

**Table 12**

#### *Model Summary of Regression Analysis*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.521 <sup>a</sup>	.271	.261	.41510

Table 12 displays the model summary of regression analysis with the R square (Coefficient of determination) value of 0.271, or 27.1% and correlation coefficient (R) 0.521 that indicates there exists positive relationship between independent and dependent variables all

in all. It shows that the independent variables, technostress variables account for 27.1% of the variation in the dependent variable, employee performance. R square values should be between 0% to 100% for the perfect model fit, higher the value of R better the model fit the data. Furthermore, it shows that additional factors beyond the scope of the model account for the remaining 72.9% of the variance.

**Table 13**

*ANOVA Table of Independent and Dependent Variables*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	23.321	5	4.664	27.069	.000b
	Residual	62.719	364	0.172		
	Total	86.040	369			

a Dependent Variable: Employee Performance

b Predictors: (Constant), Role conflict, Techno uncertainty, Techno overload, Techno complexity, Role overload

Table 13 exhibits F value and the level of significance. The F-value and p-value are obtained as  $F(5,364) = 27.069$ ,  $p < 0.05$  (p-value  $< \alpha$ ). This means that the total regression model is statistically significant and has a good fit. Thus, the model is seemed to be effective.

**Table 14**

*Coefficient Table of Independent and Dependent Variables*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.333	0.141		30.633	0.000
Techno overload	0.064	0.042	0.101	1.527	0.128
Techno complexity	-0.15	0.031	-0.264	-4.885	0.000
Techno uncertainty	-0.072	0.033	-0.11	-2.209	0.028
Role overload	-0.216	0.036	-0.309	-6.002	0.000
Role conflict	-0.058	0.04	-0.091	-1.431	0.153

From the Table 14, the unstandardized coefficient identifies the magnitude and direction of the impact of technostress factors on employee performance. Employee performance increases by 0.064 for every unit of change in techno overload, according to the beta value of 0.064. Similarly, a beta value of -0.15 in techno complexity indicates that every unit of change in techno complexity reduces employee performance by 0.15. Employee performance drops by 0.072 for every unit shift in techno uncertainty. In the case of role overload, one unit of change reduces employee performance by 0.216. Finally, for every unit change in the role conflict, employee performance drops by 0.058. In terms of the most important variable impacting employee performance, role overload comes in first with a t-value of -6.002 and a significance value of 0.000. As a result, the role overload has the greatest influence on employee performance.

#### 4.9 Sobel Test of Mediating Variables

The Sobel test is a statistical approach for determining the significance of a mediation effect. The association in between independent variable and the dependent variable is assumed to be an indirect effect caused by the influence of a third variable in mediation (the mediator). As a result, the independent variable's influence is lessened while the mediator's effect remains substantial. The Sobel test is simply a specialized t test that determines whether the reduction in the influence of the independent variable after integrating the mediator in the model is a significant reduction, and hence whether the mediating variable is statistically relevant (Sobel, 1982).

**Table 15**

*Results of Sobel Test*

	Test-statistics	P-value
Techno overload - Role overload - EP	5.40163171	0.001
Techno complexity - Role overload - EP	5.27155818	0.002
Techno uncertainty - Role overload - EP	5.61736663	0.001
Techno overload - Role conflict - EP	5.34269983	0.004
Techno complexity - Role conflict - EP	4.51195352	0.012
Techno uncertainty - Role conflict - EP	4.02894568	0.030

Significance at 0.05 level



From the table 17, we can conclude that the p-value of 0.001, which means the relationship between techno overload and employee performance is mediated by role overload. Likewise, the relationship between techno complexity and employee performance is also mediated by role overload. Similarly, the relationship between techno uncertainty and employee performance is also significantly mediated by role overload.

In case of mediation effect of role conflict, the relationship between techno overload and employee performance is significantly mediated by role conflict as p-value is 0.004 which is less than level of significance 0.05. Similarly, the relationship between techno complexity and employee performance is also mediated by role conflict. Moreover, the p-value of 0.030 indicates role conflict mediates the relationship between techno uncertainty and employee performance.

## 4.16 Hypothesis Testing Summary

**Table 18**

*Hypothesis Testing Summary*

Hypothesis	Statement	P-value	Result
H1	Techno overload has significant impact on employee performance.	0.128	Not Supported
H2	Techno complexity has significant impact on employee performance.	0.000	Supported
H3	Techno uncertainty has significant impact on employee performance.	0.028	Supported
H4a	The relationship between techno overload and employee performance is mediated by role overload.	0.001	Supported
H4b	The relationship between techno complexity and employee performance is mediated by role overload.	0.002	Supported
H4c	The relationship between techno uncertainty and employee performance is mediated by role overload.	0.001	Supported
H5a	The relationship between techno overload and employee performance is mediated by role conflict.	0.004	Supported
H5b	The relationship between techno complexity and employee performance is mediated by role conflict.	0.012	Supported
H5c	The relationship between techno uncertainty and employee performance is mediated by role conflict.	0.030	Supported
H6a	Role overload influences employee performance.	0.001	Supported
H6b	Role conflict influences employee performance.	0.153	Not Supported

Table 18 presents the summary of hypothesis testing. From the table, we can see out of 11 hypotheses, 2 of them are not supported by this study. That means H1 and H6b have been rejected and remaining other H2, H3, H4a, H4b, H4c, H5a, H5b, H5c, and H6a have been accepted.

The first hypothesis (H1) is not supported by the study as obtained p-value of 0.128 which is greater than 0.05 level of significance and is not acceptable. It indicates there is no significant relationship between techno overload and employee performance.

Similarly, the second hypothesis (H2) has been accepted. The obtained p-value of 0.000 which is less than 0.05 level of significance shows that there exists significant relationship between techno complexity and employee performance.

The hypothesis (H3) has been accepted as the obtained p-value 0.028 is less than level of significance 0.005. This has been great evidence to prove that there is significant relationship between techno uncertainty and employee performance.

The p-value 0.001 is less than the level of significance 0.05, hence hypothesis (H4a) is supported by the study. This indicates role overload mediates the relationship between techno overload and employee performance.

Likewise, the hypotheses H4b and H4C are also accepted as the obtained p-values are less than 0.05 level of significance. It means the relationship between techno complexity and employee performance is mediated by the mediator role overload. Also, the mediator role overload mediates the relationship between techno uncertainty and employee performance.

Further, the hypotheses H5a, H5b, H5c, all of them are supported by the study because the obtained p-values are less than 0.05 level of significance. It provides a strong evidence that the relationship between techno overload and employee performance is mediated by role conflict. Similarly, there is mediation of role conflict between techno complexity and employee performance. Also, there exists mediation effects of role conflict between techno uncertainty and employee performance.

The hypothesis (H6a) has been supported by the study because p-value of 0.001 is less than 0.05 level of significance which proves that role overload influences employee performance.

The p-value, which is 0.153 for the hypothesis (H6b) is greater than 0.05, hence the H6b's hypothesis role conflict influences employee performance has been rejected. It shows there

is no significant relationship between role conflict and employee performance. Therefore, it states that role conflict doesn't influence employee performance.

#### **4.11 Major Findings**

Considering the quantitative analysis of the study, the following section of the chapter highlights the main findings for the current research, which are as follows:

- The research was carried out among government employees in Kathmandu valley, of which 58.9 percent were male and 41.1 percent were female, indicating that among 370 respondents the majority are male.
- 17.3 percent of respondents were between the ages of 20 and 29, 44 percent were between the ages of 30 and 39, 28.9 percent were between the ages of 40 and 49, and 9.7 percent were between the ages of 50 and above. The great majority of those respondents are between the ages of 30 and 39.
- In terms of marital status, the majority of respondents are married i.e. 82.84%.
- Regarding the respondents' permanent residence, it was found that the majority of respondents were from Bagmati Province (41.1%).
- In terms of educational qualifications, more than half responders had a master's degree and above and were well-qualified.
- In case of the years of work experience, almost of them were found to be working for ten to twenty years.
- Most of the respondents were employees of Nepal Telecom (27.6%) following Rastriya Banijya Bank Limited (21.4%), and Nepal Rastra Bank (15.7%).
- Officer level/ Gazetted officer and Below officer/ Non- gazetted officer ranks were created based on the type and level of work. Mostly, the respondents were employed at the Officer level/ Gazetted officer (63.3%).
- In case of the years of work experience in current organizations, Most of them (42.2%) were found to be working for one to ten years in current organization.
- The descriptive analysis of techno-overload and techno-complexity factors shows a mean response greater than 3. This demonstrates that the majority of respondents are seemed to be have slightly experienced techno overload and techno complexity in the workplace.
- Similarly, Techno-uncertainty as a whole has an overall mean response of 3.5203. According to the research, the majority of respondents concur that workplace stress

has been brought on by the updating and installing of hardware, software, and networking.

- The demographic analysis of mediating variable role overload has an overall mean deviation of 3.3838. It indicates that, on average, respondents are uncertain about whether or not they are experiencing role overload.
- Likewise, another mediating factor, role conflict has an overall mean score of 3.4831. It implies that the majority of respondents agree that they experience role conflict at work.
- The demographic analysis of employee performance which is a dependent variable with an overall mean response of 2.8862 and a standard deviation of 0.48288. This shows that, on average, most respondents have a neutral opinion on their performance.
- The correlation coefficient of techno overload and employee performance is -0.228 which shows weak negative correlation at one percent level of significance. Hence, techno overload tends to decrease employee performance.
- The correlation coefficient of techno complexity and employee performance is -0.382 which shows weak negative correlation at one percent level of significance. Hence, techno complexity tends to decrease employee performance.
- The result obtained from correlation analysis shows that techno-stress and role stress variables are linearly correlated employee performance. This means techno stress and role stress tend to decrease employee performance.
- There exists significant impact of mediating effects of role overload in between technostress factors and employee performance as p-value is less than 0.05.
- The regression analysis revealed that there is no significant impact of techno overload (p-value 0.128) and role conflict (p-value 0.153) on employee performance.
- It is revealed that there is significant impact of mediating effects of role conflict and role overload in between technostress factors and employee performance as p-value is less than 0.05.

## CHAPTER V

### DISCUSSION, CONCLUSIONS AND IMPLICATIONS

This chapter covers the conclusion part of the study. The conclusions about the overall study are drawn summing up the entire investigation. Also, additional suggestions for further research are provided at the last.

#### 5.1 Discussion

The major purpose of this study is to determine the impact of technostress on employee performance among government staffs of Kathmandu valley. Also, to identify the mediation effects of role stress in between technostress and employee performance. The study factorizes technostress in three such as techno overload, techno complexity and techno uncertainty. The role stress in the study consists of role overload and role conflict. The study is based on the transactional stress theory, role theory and socio-technical theory.

According to the hypothesis 1 (H1), techno overload has significant impact on employee performance. In the research of Diaz et al. (2012) and Alam (2016), it provide the evidence that techno overload results in several undesirable outcomes and lowers employee productivity. The study found that technostress has no significant impact on employee performance. This result is also supported by the research study of Taka and Park (2016), there is no significant relationship between techno overload and employee performance.

Likewise, the second hypothesis (H2) states that techno complexity has significant impact on employee performance which is strongly supported by the study. It shows that the government staffs feel difficult to cope with the new features and systems of technology and has great impact on their performance. This result of current study supports the findings of Jena (2015) and Tarafdar et al. (2007). These both study reveals that techno complexity significantly and negatively affect employee performance.

Similarly, the third hypothesis of the study (H3) states that techno uncertainty has significant impact on employee performance which is also accepted by the study with evidences. It means that the governemnt staffs experiences certain level of stress while coping with the frequent changes in the hardware, software and networking. The study supports the finding of the study done by Owusu-Ansah et al. (2016), techno uncertainty creates mental pressure, anxiety and pessimissm while coping with the advacing pace of new ICTs.

The hypotheses relating to mediation effects of role overload, H4a, H4b, and H4c defines that there is mediation of role overload in the association between techno overload, techno complexity, and techno uncertainty and employee performance. The study also shows there is mediation effects of role overload between the variables. The study also supports the findings of Wang and Shu (2008) and Tiwari (2020).

Hypothesis H5a, H5b, and H5c states that there is mediation of role conflict in the relationship between techno overload, techno complexity, and techno uncertainty and employee performance. The result also shows that there are mediation effects of role conflict between the variables supporting the finding of other research done by Tarafdar et al. (2007) and Tiwari (2020).

Further, H6a and H6b hypotheses states that role overload and role conflict influences employee performance respectively. H6a is supported by the study which also supports the result of Tarafdar et al. (2007) and Tiwari (2020). But the empirical evidence of study found that role conflict has no significant relationship with employee performance. The study rejects the hypothesis (H6b). This result is also supported by Saranani (2015) which also concludes that the role of conflict affects the employee's performance but the effect seemed to be not significant in improving employee performance.

## **5.2 Conclusions**

Technostress is a critical concern of present context that has adverse impact on employee performance and ultimately affects productivity of the company. In some case, it is seemed to have positive impact on employee performance due to stress but all such results depend on how employees acts or manages it. When employee's ability to handle stress goes beyond a certain point, the stress may have a negative impact on their performance. In same note, new development of ICTs in workplace can generate certain level of stress in employee and affects their performance level if they are not trained in right way. Proper training must be given top importance if we are to reduce technostress and help employees to adjust with new features and system working.

The study is based on the foundation theory of transactional theory of stress, role theory, and socio-technical theory. The current study revealed that techno complexity and techno uncertainty, factors of technostress has influence on employee performance. It suggests that government employees tend to have certain level of technostress due to operation and implementation of new technology. Similarly, role overload also seemed to have influence

on employee performance. It means the government staffs tend to have work burden due to the unequal distribution of roles and responsibility which could ultimately has impact on their performance. Whereas the techno overload and role conflict, the other factors have no negative influence on employee performance. It means employees tend to have certain level of stress due to techno overload and role conflict but their performance is not really affected.

The current study revealed that there is mediation effects of role overload and role conflict in between the relationship of techno stress and employee performance. Hence, all these independent and mediating variables affect employee performance in a different way, but among all role overload is seemed to have the greatest impact on employee performance.

### **5.3 Implications**

This current research will aid to future research and give the future researcher a deeper understanding of technostress and how it affects employee performance. ICTs are changing and developing in fast pace. It compels employees to consider his skills inadequate and forces them to learn and understand various new features. As a result, it creates mental pressure, anxiety and extreme level of stress. Hence, it is crucial to learn about technostress management approaches and mechanisms as we gain knowledge of the various dimensions of technostress in order to benefit all employees.

#### **Implications for employees**

The study found that there is still a population that is utterly ignorant of the causes of the prevalence of technostress. So, this study will aid such government staffs in understanding technostress and effective methods for managing it. Also, this will have a minimal impact on performance and maintain self-awareness.

#### **Implications for organizations**

The findings will assist the organization as a whole in being aware of the mental wellbeing of its employees as we learn more about the effects of technostress on employee performance. The performance is significantly impacted by technostress. The supervisor can search for programs like training and development, advance classes to operate the new systems for technostress management and awareness. By examining the present job division, the findings will aid in enhancing employee performance.



The findings of this study can be applied to improve theoretical comprehension and direct management practices. An organization can survey the workstations to determine the amount of technostress there.

### **Implications for future research**

The primary objective of the research project was to determine how technological stress affected employees' performance among government staffs in the Kathmandu valley. Similar to that, it emphasizes the connection between the various variables examined and how they affect the employees. To my knowledge, this study is the first to examine the effects of technostress on employee performance in the Kathmandu valley with mediating effect of role stress among the few studies that have been completed in Nepal in various fields or industries. The constructions and materials have been adapted from a number of related studies in order to support the goals. The majority of the literature that is currently available supports the conclusions of this investigation. Therefore, future studies into the impact of technostress on employee performance can benefit from the findings of this study.

Only the specific component that generates technostress among government staffs in Kathmandu valley was measured in the study. The future research could add on other factors of technostress too for further investigation on its effects on employee performance. In the future, exploratory or qualitative study can be carried out to identify the most typical source of technostress. This will help the investigation and cover a variety of study dimensions through its theoretical conclusions. A comparative study in different sectors using the same sets of constructs related to technostress can be undertaken because numerous researchers have proposed multiple constructs and variables that have been thoroughly tested. The study has undertaken mediating variables which would be great help for further research conducted on mediating effects. This will make it easier to pinpoint the primary reasons for technostress at various employment levels.

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## APPENDIX

### QUESTIONNAIRE

#### Techno-stress and Its Impact on Role Stress and Employee Performance among Government Staffs of Kathmandu Valley / प्राविधिक तनाव र काठमाडौं उपत्यकाका सरकारी कर्मचारीहरूमा भूमिका तनाव र कर्मचारी कार्यसम्पादनमा यसको प्रभाव

नमस्ते,

म, एलिना शाक्य, एमबीएको विद्यार्थी, मेरो स्नातक अनुसन्धान परियोजनाको लागि यो सर्वेक्षण गर्दैछु। यस प्रश्नावलीको उद्देश्य भूमिका तनावको मध्यस्थताको भूमिकाका साथ काठमाडौं उपत्यकाका सरकारी कर्मचारीहरू बीचको कर्मचारीको कार्यसम्पादनमा प्राविधिक तनावले पार्ने प्रभावहरूको मूल्याङ्कन र परीक्षण गर्नु हो।

यदि तपाईंले यो प्रश्नावली भर्नको लागि आफ्नो बहुमूल्य समय निकाल्नुभयो भने म साँच्चै आभारी हुनेछु। म तपाईंलाई आश्वासन दिन्छु कि प्रदान गरिएको जानकारी गोप्य राखिनेछ र यो अनुसन्धान उद्देश्यको लागि मात्र प्रयोग गरिनेछ।

#### Section A: Basic Demographic Data (Place a tick mark “√” inside the box.)

खण्ड अ: आधारभूत जनसांख्यिकीय डेटा (बक्स भित्र टिक चिन्ह "√" लगाउनुहोस ।)

##### 1. Age (in years) उमेर (बर्षमा)

Below 20 (२० बर्षभन्दा कम)  20-29 (२०-२९)  30-39 (३०-३९)

40-49 (४०-४९)  50 and above (५० बर्ष र माथि)

##### 2. Gender (लिंग)

Male (पुरुष)  Female (महिला)  Prefer not to say (म भन्न रुचाउदिन)

##### 3. Marital Status (वैवाहिक स्थिति)

Married (विवाहित)  Unmarried (अविवाहित)  Others (अरू)

##### 4. Your Permanent Residence (प्रदेश)

Province No. 1 (प्रदेश नम्बर १)  Lumbini Province (लुम्बिनी प्रदेश)

Madesh Province (मधेश प्रदेश)  Karnali Province (कर्णाली प्रदेश)

Bagmati Province (बागमती प्रदेश)  Sudurpashchim Province (सुदूरपश्चिम)

Gandaki Province (गण्डकी प्रदेश)

##### 5. Educational Status (शैक्षिक स्थिति)

SLC/ SEE (एस एल सि/ एस इ इ)  Intermediate level +2 (कक्षा १२)

Bachelors (स्नातक तह)  Masters and above (स्नाकोत्तर तह वा माथि तह)

##### 6. Years of Work Experience (कार्य अनुभवको वर्ष)

Less than a year (एक बर्षभन्दा कम)  1-10 years (१-१० बर्ष)

10-20 years (१०-२० बर्ष)  20 years and above (२० बर्ष र २० बर्षभन्दा माथि)

7. Name of the organization you are currently working for (तपाईंले हाल काम गरिरहनुभएको संस्थाको नाम)

8. Rank/ Designation (पद)

Officer level/ Gazetted officer (राजपत्रन्कित)

Below officer level/ Non-gazetted officer (राजपत्र अनन्कित)

9. Years of Work Experience in Current Organization (कार्य अनुभवको वर्ष)

Less than a year (एक वर्षभन्दा कम)  1-10 years (१-१० वर्ष)

10-20 years (१०-२० वर्ष)  20 years and above (२० वर्ष र २० वर्षभन्दा माथि)

10. Techno-stressors Factors (TF) and Role Stress Factors (RSF)

Place a tick mark "√" on one of your answer. There are no right or wrong answers.

टेक्नो-स्ट्रेसर कारकहरू (TF) र भूमिका तनाव कारकहरू (RSF)

आफ्नो उत्तरमा टिक मार्क "√" राख्नुहोस्। त्यहाँ कुनै सही वा गलत जवाफहरू छैनन्।

Questions/Descriptions (प्रश्न/विवरणहरू)	Strongly Disagree (दृढतापूर्वक असहमत)	Disagree (असहमत)	Neutral (तटस्थ)	Agree (सहमत)	Strongly Agree (दृढतापूर्वक सहमत)
<b>Techno-overload</b> (प्राविधिक अधिभार)					
I am forced by new technology to work much faster. (म नयाँ प्रविधिले धेरै छिटो काम गर्न बाध्य छु।)					
I am forced by new technology to do more work than I can handle. (म नयाँ प्रविधिले गर्दा आफुले सक्ने भन्दा बढी काम गर्न बाध्य छु।)					
I am forced by new technology to work with very tight time schedules. (मलाई नयाँ प्रविधिले धेरै तंग समय तालिकाको साथ काम गर्न बाध्य पारेको छ।)					
I am forced to change my work habits to adapt to new technologies. (म नयाँ प्रविधिहरूमा अनुकूलन गर्न मेरो काम गर्ने बानीहरू परिवर्तन गर्न बाध्य छु।)					
I have a higher workload because of increased technology complexity.					

(बढेको प्राविधिक जटिलताका कारण मसँग कामको बोझ बढी छ।)					
Techno-complexity (प्राविधिक जटिलता)					
I do not know enough about new technology to handle my job satisfactorily. ( मेरो काम सन्तोषजनक रूपमा ह्यान्डल गर्न नयाँ प्रविधिको बारेमा मलाई पर्याप्त जानकारी छैन।)					
I need a long time to understand and use new technologies. ( मलाई नयाँ प्रविधिहरू बुझ्न र प्रयोग गर्न लामो समय चाहिन्छ।)					
I do not find enough time to study and upgrade my technology skills. ( मैले मेरो टेक्नोलोजी सीपहरू अध्ययन गर्न र स्तरवृद्धि गर्न पर्याप्त समय फेला पार्न सकिदैन।)					
I find new recruits to this organization know more about computer technology than I do. (मैले यस संस्थामा नयाँ भर्ना भएकाहरूलाई कम्प्युटर प्रविधिको बारेमा मलाई भन्दा बढी थाहा भएको पाएको छु।)					
I often find it too complex for me to understand and use new technologies. (प्रायःमलाई नयाँ प्रविधिहरू बुझ्न र प्रयोग गर्न धेरै जटिल लाग्छ।)					
Techno-uncertainty (प्राविधिक अनिश्चितता)					
There are always new developments in the technologies we use in our organization. ( हाम्रो संस्थामा प्रयोग गर्ने प्रविधिहरूमा सधैं नयाँ विकासहरू हुन्छन्।)					
There are constant changes in computer software in our organization. ( हाम्रो संस्थामा कम्प्युटर सफ्टवेयरमा निरन्तर परिवर्तनहरू भइरहेका छन्।)					

There are constant changes in computer hardware in our organization. (हाम्रो संस्थामा कम्प्युटर हार्डवेयरमा निरन्तर परिवर्तनहरू भइरहेका छन्।)					
There are frequent upgrades in computer networks in our organization. (हाम्रो संस्थामा कम्प्युटर नेटवर्कहरूमा बारम्बार अपग्रेडहरू छन्।)					

Questions/Descriptions (प्रश्न/विवरणहरू)	Strongly Disagree (दृढतापूर्वक असहमत)	Disagree (असहमत)	Neutral (तटस्थ)	Agree (सहमत)	Strongly Agree (दृढतापूर्वक सहमत)
<b>Role Overload</b> (भूमिका अधिभार)					
I often have to do more work than I can handle. (मैले प्रायः मैले गर्न सक्ने भन्दा बढी काम गर्नु पर्छ।)					
I am often required to do difficult tasks. (मलाई अक्सर कठिन कार्यहरू गर्न आवश्यक हुन्छ।)					
I often work beyond actual or official working hours. (म प्रायः वास्तविक वा आधिकारिक कार्य घण्टा भन्दा बाहिर काम गर्छु।)					
I often attend to many problems or assignments at the same time. (म प्रायः एकै समयमा धेरै समस्या वा असाइनमेन्टहरूमा भाग लिन्छु।)					
I never seem to have enough time to do my actual work. (मसँग मेरो वास्तविक काम गर्न पर्याप्त समय छैन जस्तो मलाई लाग्दछ।)					
<b>Role Conflict</b> (भूमिका विवाद)					
I am often asked to do things that are against my better judgment. (मलाई अक्सर मेरो राम्रो					

निर्णयको विरुद्धमा काम गर्न भनिन्छ।)					
I often receive an assignment without adequate resources and materials to execute them.( म प्रायः पर्याप्त स्रोत र सामग्री बिना नै असाइनमेन्ट प्राप्त गर्छु।)					
I often have to bend rules or policy in order to carry out an assignment. (असाइनमेन्ट पूरा गर्नको लागि मैले प्रायः नियम वा नीतिलाई झुकाउनु पर्छ।)					
I often receive incomplete requests from two or more people. (म प्रायः दुई वा बढी व्यक्तिहरूबाट अपूर्ण अनुरोधहरू प्राप्त गर्छु।)					

## SECTION B: Employee Performance

**8. Employee Performance (EP) Place a tick mark “√” on one of your answers. There are no right or wrong answers. ( कर्मचारी कार्यसम्पादन (EP) तलको कुनै एक उत्तरमा टिक मार्क “√” लगाउनुहोस्। त्यहाँ कुनै सही वा गलत जवाफहरू छैनन्।)**

Questions/Descriptions (प्रश्न/विवरणहरू)	Strongly Disagree (दृढतापूर्वक असहमत)	Disagree (असहमत)	Neutral (तटस्थ)	Agree (सहमत)	Strongly Agree (दृढतापूर्वक सहमत)
I perform hard tasks properly. (म कठिन कामहरू सही रूपमा गर्छु।)					
I try to update my technical knowledge to do my job. (म मेरो काम गर्न मेरो प्राविधिक ज्ञान अपडेट गर्ने प्रयास गर्छु।)					
I do my job according to what the organization expects from me. (संस्थाले मबाट जे अपेक्षा गरेको छ, त्यही अनुसार काम गर्छु।)					
I plan the execution of my job by defining actions, deadlines and priorities.(म					

कार्यहरू, समयसीमा र प्राथमिकताहरू परिभाषित गरेर मेरो कामको कार्यान्वयनको योजना बनाउँछु।)					
I plan actions according to my tasks and organizational routines. (म मेरो कार्यहरू र संगठनात्मक दिनचर्या अनुसार कार्यहरूको योजना बनाउँछु।)					
I take initiatives to improve my results at work.( म काममा मेरो नतिजा सुधार गर्न पहल गर्छु।)					
I seek new solutions for problems that may come up in my job. (म मेरो काममा आउन सक्ने समस्याहरूको लागि नयाँ समाधान खोज्छु।)					
I work hard to do the tasks designated to me. (मलाई तोकिएका कामहरू पूरा गर्न कडा मेहनत गर्छु।)					
I execute my tasks foreseeing their results. (म मेरा कार्यहरू तिनीहरूको नतिजाको पूर्वानुमान गर्दै कार्यान्वयन गर्छु।)					
I seize opportunities that can improve my results at work. (म काममा मेरो नतिजा सुधार गर्न सक्ने अवसरहरू प्रयोग गर्छु।)					