A Research Study on the Teleworking in Engineering Sectors in UAE

دراسة بحثية عن العمل عن بعد في القطاعات الهندسية بدولة الإمارات العربية المتحدة

by

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ABSTRACT

Purpose

Organization measures its success by its employee's performance. It is one of the most important measurements tool to indicate the efficiency and effectiveness of the corporate system performance. Employees are the valuable resources in any departments, projects, product and service. COVID pandemic has forced the world to make new arrangement (which is remotely working) from the workplaces. Engineering and industrial sector forced their employees to implement this work arrangement, which led to disturbing some organization performance. The purpose of this study is to examine how level of autonomy, feedback quality, communication process, Work-Life Interference and communication tools, affected the employee performance in the engineering and industrial sector during remotely working arrangement in COVID pandemic.

Design/methodology/approach

This research implemented the positivism methodology to study the behavior of the targeted individuals. A statistical tool used to analyze the collected data from a questionnaire survey to reveal a true nature of how employees operate. Excluding cases with missing data and people who didn't try this work arrangement, the researcher obtained a final sample of 105 participants, yielding a response rate of 79%, representing organizations from engineering and industrial sectors in United Arab Emirates. For the statistical analysis, a descriptive statistic, correlation analysis, exploratory factor analysis and regression analysis used to analyze the date collected from the questionnaire survey.

Findings

For this research study a preliminary framework was develop for variables affecting employee's performance while working remotely during COVID-19 pandemic. The findings of

this study are useful in indicating that the organizations should still look for work-life balance initiatives or practices. Likewise, it demonstrates that the employee performance was not affected by level of autonomy, feedback quality, communication process and communication tools during the pandemic.

Research limitations/ implication

This research study was limited by the number of data collected. Also, this research study was only conducted in United Arab Emirates Engineering and industrial organizations due to the research scope which to determine the mentioned variables locally. This research could be used to improve the employee's performance when they work remotely, the way to improve the performance depends on the organization strategy and structure.

Originality/ value

This research study significant due to its nature since it is the first time to conduct this kind for research using a real-life pandemic (COVID-19) specially in United Arab Emirates Engineering and industrial sectors.

Keywords: *Pandemic (COVID-19), Work Remotely, Employee performance, Engineering and industrial sectors, United Arab Emirates*

Paper type: Research paper

الخلاصة

الغاية

تقيس الشركة نجاحها من خلال أداء موظفيها. وهي من أهم أدوات القياس للإشارة إلى كفاءة وفعالية أداء نظام الشركة. الموظفون هم الموارد القيمة في أي قسم، مشروع، منتج أو خدمة. أجبرت جائحة COVID العالم على عمل ترتيبات جديدة (العمل عن بعد) من أماكن العمل. أجبر القطاع الهندسي والصناعي موظفيهما على تنفيذ ترتيبات العمل هذه، مما أدى إلى اضطراب بعض أداء الشركات. الغرض من هذه الدراسة هو دراسة كيفية تأثير مستوى الاستقلالية، وجودة التغذية الراجعة، وعملية الاتصال، وتدخل العمل والحياة، وأدوات الاتصال على أداء الموظف في القطاع الهندسي والصناعي أثناء ترتيب العمل عن بُعد في جائحة COVID.

التصميم / المنهجية / النهج

تم تنفيذ هذا البحث بالمنهجية الوضعية لدراسة سلوك الأفراد المستهدفين. أداة إحصائية استخدمت لتحليل البيانات التي تم جمعها من الاستبيان للكشف عن الطبيعة الحقيقية لكيفية عمل الموظفين. باستثناء الحالات ذات البيانات المفقودة والأشخاص الذين لم يجربوا ترتيب العمل هذا، حصل الباحث على عينة نهائية من 105 مشاركًا، مما أسفر عن معدل استجابة 79٪ ، يمثلون مؤسسات من القطاعات الهندسية والصناعية في الإمارات العربية المتحدة. بالنسبة للتحليل الإحصائي، يستخدم التحليل الإحصائي الوصفي، وتحليل الارتباط، وتحليل العامل الاستكشافي، وتحليل الانحدار لتحليل البيانات التي تم جمعها من مسح الاستبيان.

النتائج

بالنسبة لهذه الدراسة البحثية، تم تطوير إطار عمل أولي للمتغيرات التي تؤثر على أداء الموظف أثناء العمل عن بعد أثناء جائحة COVID-19. نتائج هذه الدراسة مفيدة في الإشارة إلى أنه لا يزال يتعين على الشركات البحث عن مبادرات أو ممارسات التوازن بين العمل والحياة. وبالمثل، فإنه يوضح أن أداء الموظف لم يتأثر بمستوى الاستقلالية، وجودة الملاحظات، وعملية الاتصال، وأدوات الاتصال أثناء الوباء.

قيود البحث / التضمين

كانت هذه الدراسة البحثية محدودة بعدد البيانات التي تم جمعها. كما أن هذه الدراسة البحثية أجريت فقط في دولة الإمارات العربية المتحدة في المنظمات الهندسية والصناعية بسبب نطاق البحث الذي يحدد المتغيرات المذكورة محليًا. يمكن استخدام هذا البحث لتحسين أداء الموظف عندما يعمل عن بعد، وتعتمد طريقة تحسين الأداء على استراتيجية المنظمة وهيكلها.

الأصالة / القيمة

تعتبر هذه الدراسة البحثية مهمة نظرًا لطبيعتها حيث إنها المرة الأولى التي يتم فيها إجراء هذا النوع من البحث باستخدام جائحة واقعية (COVID-19) خاصة في قطاعي الهندسة والصناعة بدولة الإمارات العربية المتحدة.

الكلمات المفتاحية: جائحة (كوفيد -19)، العمل عن بعد، أداء الموظف، القطاعات الهندسية والصناعية، الإمارات العربية المتحدة

نوع الأطروحة: ورقة بحثية

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LIST OF SYMBOLS AND NOMENCLATURE

GP	Graduation Project
GDP	Gross domestic product
FWAs	Flexible work arrangements
EU	European Union
PMS	Performance Measurement Systems
ICT	Information and Communications Technology
KMO	Kaiser-Meyer-Olkin

CHAPTER 1
INTRODUCTION

Successful organizations measure its success by the success of the business which determined by its employee's performance. Performance measurement is one of the most important criteria which for the organization to build its reputation and business continuity. Performance measurement can be defined as indicator of how the system is working. This system could be organization, departments, projects, products or even employees. The term is well defined and studied between academics and practitioners from a variety of functional disciplines. The clearest definition of performance measurement according to scholars is the process of quantifying the efficiency and effectiveness of any system (Neely, Gregory & Platts 1995).

Recently in 2020, a worldwide pandemic which is COVID-19 lead the world to enter recession. The crisis caused the global economic to enter a recession since 2009 economic crisis. The world faced a new challenge never faced before which required to take special measurements such as social distancing to avoid the virus spread. The countries had to close borders and stop flights which did reflect negatively on the oil and gold prices. Businesses all over the world had to close and ask all their employees to work from home. Statista is platform shows the statistics data from around the world, it shows that since the beginning of 2020 several countries faced a negative economic impact. Out of the world's seven largest economies, the United Kingdom was the most negatively affected by coronavirus. The GDP growth rate of UK stood at minus 9.6 percent compared to the previous year (Szmigiera 2021). **FIGURE 0-1** shows the GDP contraction in UK compared to previous years (Trading Economics n.d.).

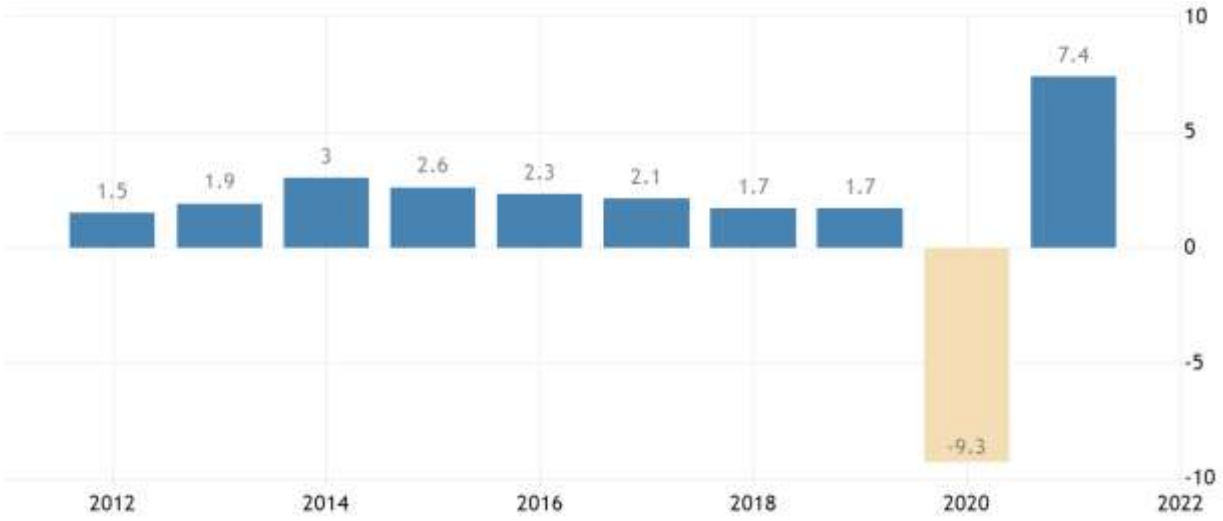

FIGURE 0-1: UK GDP Rates (Trading Economics n.d.)

One of the most important sectors affected by this crisis were the engineering and industrial companies. The engineering and the industrial companies required their employees to work from the company's offices and on-site not remotely from home in order to maintain the required performance. These companies did not expect to face such a challenge which forced them to make a difficult decision to maintain the business. Most of the businesses around the world did not account for such risk. The crisis did not allow the companies to determine if this decision is effective or not and what are the consequences.

1.1 Problem Statement

For a long time, people used to gather and work in common place called the workplace. This way of working is known as traditional workplace. The traditional workplace enables the organizations to manage, plan, monitor and control the employee performance easily. Later new way of working is introduced in late 20th termed telecommuting (Berthiaume 2020 & Mears, Jennifer 2007). It was the period where people start using internets and the virtual connections to work. In 2020 as stated above, a pandemic (COVID-19) caused the organizations to send their employees to work remotely from home which most of the organization were not ready to apply.

Working from home is a form of telecommuting (Eatough 2021). However, most of the engineering and industrial sectors were not ready to use such a method for conducting businesses. According to study about the factors effecting employee performance proof that there are various factors that affect the employee performance at the work place (Diamantidis & Chatzoglou 2019). This research will use these factors to measure the employee's performance while they work remotely from home at the engineering and industrial sectors. These factors analyzed and in depth evaluated during this research study to prove that these factors do affect the employees and the companies' performances since these sectors have a different core businesses and way of conducting the works.

1.2 Aims and Objectives

The aim of this research is to know how effective is working remotely for the engineering and industrial sectors. Either working remotely has negative impact or positive impact on the organizations. The main objective of this research is to measure the company's performance through the employee's performance during working from home using employee and environmental related factors.

1.3 Significance and Limitations

The significance of this research that it is the first time to conduct such study in United Arab Emirates with companies that work in engineering and industrial sectors. Previous researches were conducted during normal situations not during pandemics, and it was based on certain requirements such as to reduce employee's turnover, to minimize traffic gamming and pollutions (Giovanis 2018). This research will help to improve the future performance of the engineering and industrial companies in the United Arab Emirates. It will provide a better understanding of the current performance during COVID-19 crises, also what needs to be done in order to enhance the employee's performance.

This research study will be based on the analysis of further journals and research papers in employee's performance measurement field since there are no primary or secondary data available from the targeted sectors (in United Arab Emirates). Collecting the data will help determine the performance of the teleworkers in United Arab Emirates engineering and industrial sectors, the survey will be done with different levels of employees from all engineering departments various type of engineers and industrial sectors.

1.4 Summary of Report Structure

In this dissertation there are six chapters. The first chapter, is the introduction, which includes the research questions and the aim of this research. Chapter two, is the literature review and the formulation of the hypotheses. Chapter three, the details of methodology this thesis and the data measures. Chapter four, shows the data results and statistical analysis, As well the discussions and the findings. Finally, chapter six, is the conclusion of this thesis.

CHAPTER 2
LITERATURE REVIEW

Working remotely is not new terminology since it was introduced in 1973. It was proposed as an alternative or solution to the traffic issues at that time. It was introduced by scientist called Jack Nilles, who created the term telecommuting. An experiment was made by him to prove the effectiveness of his theory (Berthiaume 2020 & Mears, Jennifer 2007). Telecommuting, teleworking and working from home are different terminologies and processes but it leads to the same outcomes by the term of worker routine. The word teleworking is officially defined term by the U.S. Office of Personnel Management (OPM). The agency defines the term as preforming the responsibilities and duties of an employee in any time from different location other than worksite place (Office of Personnel Management, 2010).

2.1 Flexible Work Arrangements

There are different terminologies and theories clarifying the idea of working from any place other than the worksite place. Flexible work arrangements (FWAs) are one of the old terms that have been used till today in most organizations around the world. FWA can be split into two terms: Flextime and Flexplace (Workplace Flexibility, 2006).

Flextime is generally working the required hours with the possibility to decide when to start and finish working. The concept was credited by Christel Kammerer in the 1960s, who suggested this idea to solve the problems associated with family obligations and working periods (Janet Anderson 2019). Studies shows that flextime have positive effect on employee's performance. It could increase the productivity by balancing between the work and family roles (Bonface Mwebi & Nicholas Kadaga 2015). According to study about the psychological effect of flextime, they validate that workplace flextime use would reduce employees' cognitive failures at work and home by increasing their perceived control in both domains (Hsu, Chen & Shaffer 2019). A study conducted in Canada, argues that the flextime is generated by the organizations for business reasons

and not for employee life balance. They accomplished that flexible work schedules that are being promoted by organizations are unlikely to achieve the dual goal of providing flexibility to businesses and, at the same time, work-family -life balance for workers (Zeytinoglu, Cooke & Mann 2010). Most of the scholar's models can be related with the problems associated with home and family obligations

On the other hand, flexplace is doing the required duties of the employer in different places other than worksite. The term was credited to author Frank Schiff (1979), who wrote an article about working from home in 1979. The article introduced the idea as a solution for the traffic congestions, air pollution and gasoline consumption. According to study Published in 2021, Fathers who use flexplace arrangement spend more time in routine housework and childcare than fathers who do not work from home (Carlson, Petts & Pepin 2021). According to Washington (2001), his argument is about if flexplace is suited for any organization. He listed several benefits for the organization, employees and environment. The significant impact was the financial benefits, the reduction in floor space used in offices, which also means reducing the cost of operating a workplace for the organization. Also, the employees will reduce car operating cost, tolls and parking fees.

Teleworking is another term of Flexplace and has been developed since 1973 till today. Several agencies around the world have adopted the teleworking method with their employees. Teleworking has many impacts as for internal and external aspects of the organizations. Internal aspects are the physical recourses, workplace and employees. The external aspects are the suppliers, customers and partners. There are direct and indirect impact too. The direct impact will affect the organization in general while the indirect mean it has no effect to the organization. Statistical information shows that the teleworking has increased through the years. That indicates the teleworking is effective in good way to the organizations. Teleworking employee is hired and permitted to work remotely based on mutual agreement between the individuals and the organization. However, in 2020 the pandemic (COVID-19) forced all entities to make their resources to work remotely. Several companies could not implement the teleworking method due to nature of the business.

2.2 Teleworking and Employee Performance

According to literature review conducted by scholars' team, they did review over sixty-three studies that relate teleworking and well-being of the personals. They found out that job satisfaction generally had a positive influence on the teleworkers. Although there was a positive association between teleworking and job satisfaction, it is only valid with specified conditions like time of teleworking. Also, it is concluded that work autonomy levels are increased with the teleworkers but with cost. On the other hand, there are no boundaries between working and non-working times which led to intensified working and longer working hours. Additionally, several researches were concern with one of the drawbacks of teleworking which is professional isolation. As an example, the professional developmental activities are undesirably related to teleworking. It is included the informal learning, networking, mentoring from colleagues and information sharing. In their review, they see these concerns could be mitigated Since the current communication technologies is way advanced to see that the isolation as drawback (Maria, Christine, Carlo & Evie 2018).

According to Welz and Wolf (2010) from European Foundation for the Improvement of Living and Working Conditions, they have examined the agreement that took place within European Union in 2002. It was about regulating issues such as employment and working conditions, health and safety, training, and the collective rights of teleworkers. The authors showed how teleworking have increased from 2002 till 2005 in the EU. They have concluded that teleworking is viewed in positive terms by the EU. They argue that telework as a means to enhance productivity and employment.

Several articles and studies show that there is relationship between teleworking and employee performance. A study form Abia State University in Nigeria shows that there is significant relationship between teleworking and speedy service delivery. working at home has positive impact on the employee performance (Onyemaechi, Peter Chinyere & Emmanuel 2018).

according to Golden and Gajendran (2019), job complexity, interdependence and social support has strong relation to the job performance for the teleworkers. They concluded that a teleworker who held complex jobs with low level of interdependence and social support has positive association with job performance. According to Nishad, there are effects on the employee performance if the companies implemented the telecommuting strategies. There are well known recognized corporates who adapted the telecommuting since the beginning of 21st century (Google, Microsoft, Twitter, etc..). The percentage of telecommuters indicated that it's increasing throw the years (Shamnadh 2013).

Moreover, one study shows the difference between implementing internal and external flexibility dimensions on the firm performance. Also, it argues that firms that practice teleworking arrangement have better firm performance than non-adopters. The proposed internal dimensions are: Flextime, job involvement, Flexible monitoring and variable compensation. The external dimensions are: contingent work, subcontracting and spatial decentralization. Their findings indicate that there are positive association between the internal dimensions with teleworking and the firm's performance (Angel, Manuela, Pilar & Vela 2007).

According to research about the impact of emotions on the teleworkers, it examines the emotional impact on the teleworkers by interviews. They linked the advantages and disadvantages of this work arrangement to emotional factors that affect the workers (Mann, Varey & Button 2000). **TABLE 0-1** shows the summary of their study:

Advantages	Emotional factors	Disadvantages	Emotional factors
Less travel	Less stress	Isolation	sense of belonging
More flexibility	job satisfaction or enjoyment	Longer hours	More stress and less satisfaction
Better working environment	Less stress	Lack of support	Less emotional support
Fewer distraction	job satisfaction or accomplishment	Less sick leave	More stress and less satisfaction
cheaper	financial concerns for enjoyment	Career progression	Reduced feelings of loyalty

TABLE 0-1: Emotional Impact of Tele-Working (Mann, Varey & Button 2000)

Most of studies are conducted before the crises of COVID-19 occur. The most recent study that relate COVID-19 and Teleworking is conducted in Belgium. It evaluates the teleworking in many aspects and domains. Most of the items are in line with frequently occurring items in the teleworking literatures like: social isolation, performance, work-life balance and well-being. The results show that although most of the observations are positive regarding teleworking, there are downsides like the employee isolation socially and professionally which led to decrease their chance of promotion and professional development (Baert, Lippens, Moens, Sterkens & Weytjens 2020). According to study in UAE, it has been tested several factors that influence on the choice for teleworking mode. It hypothesizes that demographic variables like age, gender and nationality etc., are influencing the choice to telework. As well as the influencing of the facilitators and inhibitors of this arrangement (Aboelmaged, Mohamed & Elamin 2009).

2.3 Research Conceptual Framework

The rationale of this study is to show how effective and efficient teleworking arrangement for engineering industries. The fact that COVID-19 forced the organizations to implement this working arrangement regardless of the consequences, was a chance to study it. To study this in depth, a theoretical framework is formed based on the conducted literature review about teleworking. In order to form the framework, a depth search conducted about the factors that affects the performance of the employees. Also, link the individual performance to the organization performance. The effect of teleworking arrangement is widely complicated and linked thru individuals, managers and organizations. The research conceptual model has dependent and independent variables. ERROR! REFERENCE SOURCE NOT FOUND. show the initial conceptual framework of this research. There are five independent factors and one dependent factor will be studied are listed below.

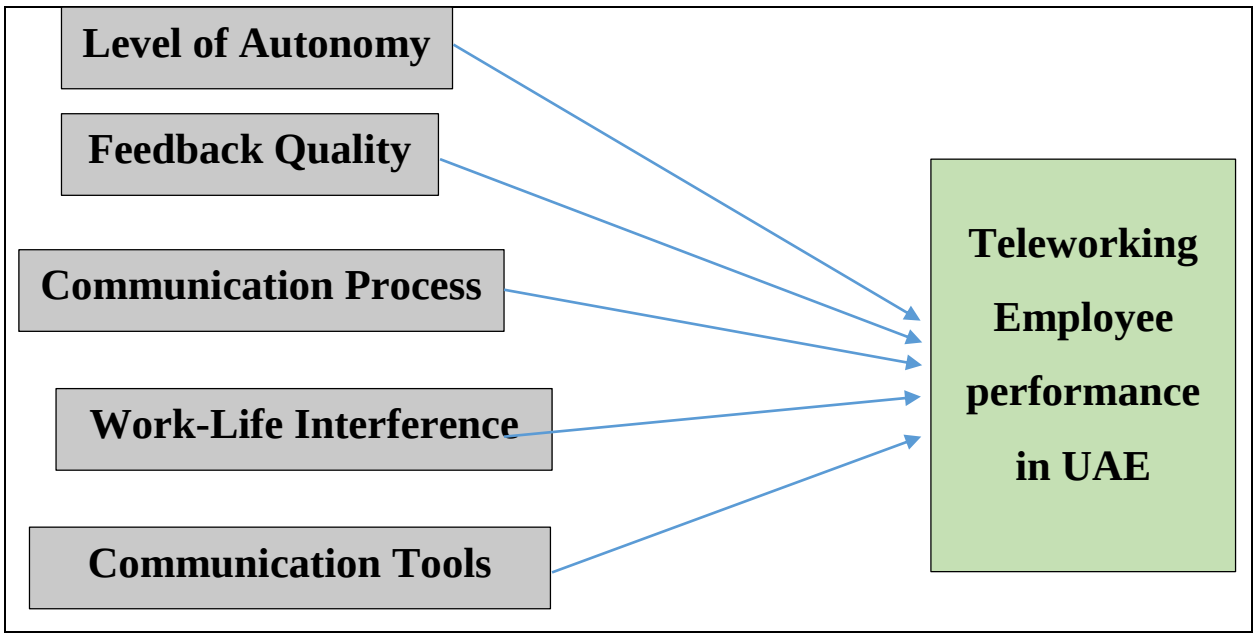

FIGURE 0-1: Conceptual Framework

- **Employee Performance:**

Employee performance is how the individuals efficiently complete their tasks in the corporation. It can be seen as a behavior or outcome produced by the workers. Employee performance is controlled or defined by the organization's regulations, requirements, goals and expectation (Choon Hee, et al. 2019). If the workers fulfil their organization's tasks effectively and efficiently, then it can be understood as this worker has high performance. According to study about the factors effecting employee performance, there are wide range of factors that could influence the employee performance. A few examples are management support, organizational climate, job environment, adaptability and intrinsic motivation play strong role to control employee performance (Diamantidis & Chatzoglou 2019). Employee performance can be evaluated using three dimensions namely, job time, job quality and job quantity. (Na-Nan et al. 2018).

- **Level of Autonomy:**

Autonomy is the freedom given by the organization to the employee in many different aspects (Diamantidis & Chatzoglou 2019). These forms of freedoms include clocking in, levels of decision-making power, choices solutions to problems presented. Working remotely can give the employees high level of autonomy relative to workplace. According to several scholars, there is significant relation between the level of autonomy and the employee performance (Morgeson et al. 2005; Cho & Yoon 2009; Gellatly & Irving 2001; Huang 2015). According to Cummings and Molloy (1977), working autonomy is one of the seven strategies that improve the productivity and the quality of work life. Also, work autonomy is related to the job outcomes like: job satisfaction, job involvement and organizational commitment (Mathan et al. 2012). Thus, we expect to find a positive association between the level of autonomy and the employee performance.

H1. The level of job autonomy is related to the teleworker's performance

- **Feedback Quality:**

The feedback can be defined as the response between supervisor-subordinate and coworker-coworker about task or idea that helps to achieve the organization goals. Feedback could be related to working remotely in term of the quality of feedback. According to Farooq and Aslam (2011), Feedback from employees of all level from every perspective could allow the employees to know about how much they are deviating from the firm goals. According to one article about feedback, feedback can help the team members to understand the strengths and the weaknesses of the team, allowing to increase and build motivated team members. A motivated team is often a productive one (Indeed Editorial Team 2021). According to experiment on the feedback quality, they concluded that higher feedback quality significantly increases the productivity (Drouvelis & Paiardini 2021). Thus, the researcher expects to find an association between the quality of feedback and the teleworking employee performance.

H2. The quality of feedback is related to the teleworker's performance

- **Communication Process:**

Communication process can be defined as the transmission of information from one person to another. Its two-way process where the idea, thoughts, feelings and opinions are transmitted between two or more individual with the intent of creating a shared understanding (Megha 2016). The work processes are highly affected in the teleworking arrangement. Since the normal work processes could not be implemented normally with teleworking. There are special work processes for the teleworkers and could affect their performance. Conversations with an employee's face to face is different than virtual conversations. That will affect the judgments of the personnel between each other's. There are three types of communication inside the organization: horizontal, vertical and diagonal communication. According to study about communication channels, it concludes that effective communication has positive association with the organization performance (Musheke & Phiri 2021). According to Reinsch (1997), the organization's performance depends on the communications and relations between supervisors and employees. Also, one study concluded there should be proper horizontal upward and downward communication to improve the employee performance thru improving the teamwork (Choon Hee, et al. 2019). Thus, there is a relation between the communication process with the teleworker's performance.

H3. There is relation between downward communication and the teleworker's performance

- **Work-Life Interference:**

Work-life Interference can be defined as the stability between the work and personal life in four main components: time, behavior (goal accomplishment), strain (anxiety, tension, having to miss important personal activities, and difficulty focusing attention) and energy (Fisher 2001). According to Fisher (2001), work-life Interference has three dimensions: work interference with personal life (WIPL), personal life interference with work (PLIW), and work/personal life enhancement (WPLE). Lower level of WIPL and PLIW is indication of high level of work-life balance. Also, lack of work-life balance was related to a host of strains, including higher stress, job dissatisfaction, life dissatisfaction, lack of organizational commitment, and job turnover. Similar

to the communication processes, the work atmosphere with teleworkers is totally different from the work place. Changing the atmosphere with the employees will affect their performance, because family obligations and work-life balance will be affected in teleworking arrangements. The existing literature on the topic of telecommuting and its impact on work-family conflict provides mixed results (Sarbu 2018). Work-life interference has significant effect on the performance and productivity of employees (Bloom & van 2006; Johari et al.2018). The organizations around the world already start implementing what so called Work-life balance practices. Thus, there is a relation between work-life Interference dimensions and the teleworker's performance.

H4. There is relation between work-life Interference dimensions and the teleworker's performance

- **Communication tools (ICT):**

The Communications tools nowadays is accessible by everyone, and it is very advanced. These tools are improved through the years. Also, it was considered as type of constrain before for the teleworkers. According to a study about technostress during COVID-19, it studies the effect of using Information and Communications Technology ICT on the teleworker's virtual environment. According to Brod (1984), Technostress is defined as "*modern disease of adaptation caused by an inability to cope with the new computer technologies in a healthy manner*". In their study, they have tested three dimensions of technostress: techno-overload, techno-invasion (conflict with personal time) and techno-complexity. The three dimensions are related to the uses of ICT and its effect. Their results show that the technostress is subjective to age, higher professions, female gender, and a bad workplace environment (Gabr, Soliman, Allam & Raouf 2021). The relation between technostress and employee performance has mixed results between positive and negative effect (Saleem et al. 2021). According to study in engineering sector, the higher the Technostress, the lower performance of employees (Suharti & Susanto 2014). Thus, there is an impact from technostress on the teleworker's performance.

H5. There is relation between technostress and the teleworker's performance

2.4 Theory and Hypotheses

In summary, based on the literature search five hypotheses are formed. The hypotheses are listed below:

H1. The level of job autonomy is related to the teleworker's performance
H2. The quality of feedback is related to the teleworker's performance
H3. There is relation between downward communication and the teleworker's performance
H4. There is relation between work-life Interference dimensions and the teleworker's performance
H5. There is relation between technostress and the teleworker's performance

CHAPTER 3
METHODOLOGY

This research is based on social aspect or individual's behavior in certain conditions. It needs realistic information about the behavior of these individuals. This research will focus on the employee's performance during the pandemic stated above in the engineering and industrial sectors. Employee performance is one of the indications that determine the organization success. This research implements the positivism methodology to study the behavior of the targeted individuals. This method focuses on a realistic or factual data to derive the right conclusion. It uses statistical tools to analyze the data to reveal a true nature of how individuals operate (Chapel n.d.). The required data will be collected using questionnaire survey. The amount of data determines the accuracy and how significant this research. The hypotheses establish how the objectives of this research is reached. The hypotheses lead to have logical and experimental evidence of the targeted study.

3.1 Sample and Data Collection

The data of this study comes from a survey of a representative sample of 133 respondents working in medium and large sized engineering firms located in UAE. The draft questionnaire used for this study was pilot tested to check its content validity, terminologies, suitability and appropriateness for the target population. Excluding cases with missing data and people who didn't try this work arrangement, the researcher obtained a final sample of 105 participants, yielding a response rate of 79%. The majority of the participants were between the ages of 25 to 34 years old (65.49%), the ages of 18 to 24 years old (16.81%) and the ages of 35 to 44 years old (17.7%). The majority was males (62.28%), and the females (37.72%), out of them 64.04% did not have any children. Among them, 37.93% were in aerospace sector, 18.1% were in other sectors, 12.93% were in energy sector, 12.07% were in oil and gas Sector, 9.48% were in civil and architectural sector and 9.48% were in automotive sector.

3.2 Measures

A database with all the survey information was statistically analyzed with the program SPSS 25. The statistical analysis was descriptive of the variables included in the survey.

A 7 point scale was used ranging from 1 (“strongly agree”) to 7 (“strongly disagree”) for all substantive variables. Employee performance is the dependent variable and measured using a 12 item scale. The items were revised from comprehensive employee job performance Survey (Na-Nan et al. 2018). Participants were asked about the job time, job quality and job quantity dimensions as an indications of employee performance. An example item featured “My tasks are normally completed on schedule”. Level of autonomy was measured using the 9 item scale from Breaugh's work autonomy scales (Breaugh 1985). Example item is “I am able to choose the way to complete my tasks”. Feedback quality was measured using the 5 item scale from The Feedback Environment Scales (Steelman et al. 2004). Illustrative item is “My manger gives me useful feedback about my job performance”. Communication Process was measured using the 6 item scale adapted from study about the Impact of Communication on Employee Performance (Choon Hee, et al. 2019). Example item is “My manger keeps essential information flowing to me”. Work-Life Interference was measured using the 8 item scale adapted from Fisher (2001) study that developed the Work-Life Interference scales. Example item is “My tasks suffer because of everything going on in my personal life”. Communication tools were measured using the 8 item scale adapted from Technostress Questionnaire (Brod 1984). Example item is “I don't have enough information about this work arrangement to handle it satisfactorily”. **TABLE 0-1** show the Cronbach’s Alpha of the variables.

TABLE 0-1: Cronbach’s Alpha

Variables	Cronbach’s alpha
Employee performance	0.887
Level of Autonomy	0.887
Feedback quality	0.68
Communication Process	0.846
Work-Life Interference	0.932
Communication tools	0.857

CHAPTER 4

ANALYSIS, RESULTS AND DISCUSSION

This chapter includes statistical analysis of the data and the results of this analysis. Also, the discussion about the findings is included. Descriptive statistics shows the brief descriptive coefficients for the entire collected data. Then, exploratory factor analysis was conducted to examine the reliability of the variables and get the surrogate representative for a particular variable dimension. Using the surrogate representatives, correlation analysis used to find if there are a linear relationship between the variables and compute their association and strength. Finally, the regression analysis was conducted to test the research question and hypotheses.

4.1 Descriptive Statistics

Items	Mean	SD	Items	Mean	SD
perf1	1.73	0.902	Communication1	2.37	1.402
perf2	1.7	0.942	Communication2	2.52	1.532
perf3	1.85	1.246	Communication3	2.09	1.226
perf4	1.9	1.033	Communication4	2.23	1.416
Perf5	2.7	1.748	Communication5	1.96	0.929
perf6	1.99	1.236	Communication6	2.35	1.193
perf7	1.83	1.004	**Overall Communication**	**2.25**	**0.976**
perf8	1.92	0.987	WorkLife1	3.44	1.876
perf9	1.97	1.236	WorkLife2	3.42	1.859
perf10	1.98	1.074	WorkLife3	3.68	1.878
perf11	2.07	1.022	WorkLife4	3.94	1.98
perf12	2.33	1.306	WorkLife5	4.15	2.134
Overall perf	**1.2**	**0.78**	WorkLife6	4.13	1.986
Autonomy1	2.29	1.238	WorkLife7	4.28	2.101
Autonomy2	2.04	1.337	WorkLife8	3.99	2.182
Autonomy3	2.18	1.357	**Overall WorkLife**	**3.88**	**1.65**
Autonomy4	2.39	1.312	tools1	3.61	2.002
Autonomy5	2.4	1.458	tools2	3.61	1.998
Autonomy6	2.63	1.436	tools3	3.57	2.17
Autonomy7	3.14	1.637	tools4	2.94	1.737
Autonomy8	3.33	1.838	tools5	3.85	2.093

Autonomy9	2.96	1.581	tools6	3.7	2.236
Overall Autonomy	**2.6**	**1.071**	tools7	3.65	1.921
Feedback1	2.42	1.622	tools8	3.85	2.013
Feedback2	2.28	1.535	**Overall tools**	**3.6**	**1.43**
Feedback3	2.06	1.406			
Feedback4	2.29	1.621			
Feedback5	4.16	2.057			
Overall feedback	**2.64**	**1.101**			

show the summary statistics of the entire dataset. Mean and standard deviation are used to interpret the data. Also, overall Mean and standard deviation are calculated to represent each factor. Descriptive statistics for employee performance (perf) reveals an overall mean score of 1.2 (SD=0.78). This shows a positive perception of perf amongst the employees. Item 2 had the lowest mean value, indicating that the employees fulfilled their tasks as per the specifications and standards. Level of Autonomy (Autonomy) reveals an overall mean score of 2.6 (SD=1.071). This shows a positive perception of Autonomy amongst the employees. Item 2 had the lowest mean value, indicating that the employees are able to choose the way to complete their tasks. The feedback quality (Feedback) reveals an overall mean score of 2.64 (SD=1.101). This shows a positive perception of Feedback quality amongst the employees. Item 3 had the lowest mean value, indicating that the employees do appreciate the feedback they receive from the manger. The Communication Process (Communication) reveals an overall mean score of 2.25 (SD=0.976). This shows a positive perception of Communication Process amongst the employees. Item 5 had the lowest mean value, indicating that the employees know what is expected from them by the manger when they are given the tasks at work. The Work-Life Interference (WorkLife) reveals an overall mean score of 3.88 (SD=1.65). This shows a neutral perception of Work-Life Interference amongst the employees. Item 2 had the lowest mean value, indicating that the employees often have to make a difficult decision between their tasks and their personal life. The Communication tools (tools) reveals an overall mean score of 3.6 (SD=1.43). This shows a neutral perception of Communication tools amongst the employees. Item 4 had the lowest mean value, indicating that the employees have to be always available due to this work arrangement.

TABLE 0-1: Descriptive Statistics

Items	Mean	SD	Items	Mean	SD

perf1	1.73	0.902	Communication1	2.37	1.402
perf2	1.7	0.942	Communication2	2.52	1.532
perf3	1.85	1.246	Communication3	2.09	1.226
perf4	1.9	1.033	Communication4	2.23	1.416
Perf5	2.7	1.748	Communication5	1.96	0.929
perf6	1.99	1.236	Communication6	2.35	1.193
perf7	1.83	1.004	**Overall Communication**	**2.25**	**0.976**
perf8	1.92	0.987	WorkLife1	3.44	1.876
perf9	1.97	1.236	WorkLife2	3.42	1.859
perf10	1.98	1.074	WorkLife3	3.68	1.878
perf11	2.07	1.022	WorkLife4	3.94	1.98
perf12	2.33	1.306	WorkLife5	4.15	2.134
Overall perf	**1.2**	**0.78**	WorkLife6	4.13	1.986
Autonomy1	2.29	1.238	WorkLife7	4.28	2.101
Autonomy2	2.04	1.337	WorkLife8	3.99	2.182
Autonomy3	2.18	1.357	**Overall WorkLife**	**3.88**	**1.65**
Autonomy4	2.39	1.312	tools1	3.61	2.002
Autonomy5	2.4	1.458	tools2	3.61	1.998
Autonomy6	2.63	1.436	tools3	3.57	2.17
Autonomy7	3.14	1.637	tools4	2.94	1.737
Autonomy8	3.33	1.838	tools5	3.85	2.093
Autonomy9	2.96	1.581	tools6	3.7	2.236
Overall Autonomy	**2.6**	**1.071**	tools7	3.65	1.921
Feedback1	2.42	1.622	tools8	3.85	2.013
Feedback2	2.28	1.535	**Overall tools**	**3.6**	**1.43**
Feedback3	2.06	1.406			
Feedback4	2.29	1.621			
Feedback5	4.16	2.057			
Overall feedback	**2.64**	**1.101**			

4.2 Exploratory Factor Analysis

Exploratory factor analysis was conducted using SPSS 25 to examine the reliability of the variables. After several Iterations, some of the items were removed from each variable due to cross-loading. Items 3 to 12 were removed from the employee performance variable. Also, items 1 to 5, 7 and 8 were removed from the level of Autonomy variable. Items 4 and 5 were removed from the feedback quality variable. Items 1 and 4 to 8 were removed from the Work-Life Interference variable. Finally, items 1, 4 to 6 and 8 were removed from the Communication tools variable. From the **TABLE 0-2**, it can be seen that all items are inter-correlated since the Correlation Matrix Determinant is greater than 0.00001. Also, Kaiser-Meyer-Olkin KMO test check if the sample is big enough, the sample is adequate if the value of KMO is greater than 0.5. Bartlett's test should have to be significant for inter-correlated items. According to the variance extraction rule, the loading should be more than 0.7 to be accepted. **TABLE 0-2** show the results of the EFA and the updated Cronbach's alpha after the iterations and eliminating some items.

TABLE 0-2: EFA Results From SPSS

Variables	Items	KMO Test	Bartlett's Test Sig.	Loading	Cronbach's alpha
Employee performance	perf1	0.625	0.0000	.937	0.887
	perf2			.932	
Level of Autonomy	Autonomy6			.833	0.713
	Autonomy9			.890	
Feedback quality	Feedback1			.914	0.930
	Feedback2			.929	
	Feedback3			.907	
Communication Process	Communication2			.850	0.709
	Communication6			.844	
Work-Life Interference	WorkLife2			.888	0.871
	WorkLife3			.910	
Communication tools	Tools2			.848	0.817
	Tools3			.811	
	Tools7			.827	

4.3 Correlation Analysis

Correlation analysis conducted to see how the variables are correlated to each other. **TABLE 0-3** show the results of the analysis from SPSS. The highest item factor loading was selected from the EFA as a surrogate representative for a particular variable dimension. Pearson product correlation of employee performance and Work-Life Interference was found to be very low negative correlation and statistically significant ($r = -.23$, $p < 0.05$). This shows that an increase in Work-Life Interference would lead to a lower employee performance. Pearson product correlation of Level of Autonomy and Communication tools was found to be very low positive correlation and statistically significant ($r = .275$, $p < 0.01$). This shows that an increase in level of autonomy would lead to higher stress from communication tools. Pearson product correlation of Feedback quality and communication process was found to be low positive correlation and statistically significant ($r = .326$, $p < 0.01$). This shows that an increase in Feedback quality would lead to a higher Communication Process. Pearson product correlation of Communication Process and Communication tools was found to be very low negative correlation and statistically significant ($r = -.2$, $p < 0.05$). This shows that a good Communication Process would lead to lower stress from Communication tools. Pearson product correlation of Work-Life Interference and Communication tools was found to be very low positive correlation and statistically significant ($r = .281$, $p < 0.01$). This shows that an increase in Work-Life Interference would lead to higher stress from Communication tools.

TABLE 0-3: Correlation Matrix

	perf1	Autonomy9	Feedback2	Communication2	WorkLife3	Tools2
perf1	1					
Autonomy9	.020	1				
Feedback2	.137	.127	1			
Communication2	.088	-.103	.326**	1		
WorkLife3	-.233*	.070	.068	-.121	1	
Tools2	-.101	.275**	-.024	-.200*	.281**	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

4.4 Regression Analysis

Linear multiple regression was conducted using the stepwise method to test the research question and hypotheses. The highest item factor loading was selected from the EFA as a surrogate representative for a particular variable dimension. The regression model summary is shown in ERROR! REFERENCE SOURCE NOT FOUND.. According to the model, 5.4% of the variance in employee performance among teleworkers was explained by the independent variable (Work-Life Interference), incorporated as part of this study.

TABLE 0-4: Regression Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.233[a]	.054	.045	.881	1.802

Note: Dependent Variable: employee performance

TABLE 0-5 indicates that the ANOVA was statistically significant, F (105) = 5.9 at $p < .05$, for Work-Life Interference predicting employee performance.

TABLE 0-5: ANOVA RESULT

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.595	1	4.595	5.921	.017[b]
Residual	79.938	103	.776		
Total	84.533	104			

Note: Dependent Variable: employee performance

TABLE 0-6 reports the coefficient data for the model. Work-Life Interference ($\beta = -.233$, t (105) = $p < .05$), were the only predictor that is statistically significant in predicting employee performance with teleworking arrangement. However, Level of Autonomy, Feedback quality, Communication Process and Communication tools was not significant. **TABLE 0-7** shows the excluded variables with their significant values (t (105) = $p > .05$).

Table 0-6: Variables Coefficient

Variables	B	Std. Error	Beta	t	Sig.
Work-Life Interference	-.112	.046	-.233	-2.433	.017

TABLE 0-7: Excluded Variables

Model	Beta In	t	Sig.	Collinearity Statistics		
				Tolerance	VIF	Minimum Tolerance
Level of Autonomy	.036[b]	.377	.707	.995	1.005	.995
Feedback quality	.154[b]	1.613	.110	.995	1.005	.995
Communication Process	.061[b]	.629	.531	.985	1.015	.985
Communication tools	-.039[b]	-.385	.701	.921	1.086	.921

TABLE 0-8 summarizes the regression results and the overall findings of the study based on the research question and hypotheses.

4.5 Discussion

4.5.1 Key Findings Summary

The objective of this research was to know how effective is working remotely for the engineering and industrial companies. The outcomes were measured through the employee's performance during working from home using 1 dependent variable and 5 independent variables. It was hypothesized that these independent variables have a relation to the dependent variable. This study identified that a relationship exists between employee performance and work-life Interference in the engineering sector. Work-Life Interference were the only predictor that is statistically significant in predicting employee performance. Also, the research analysis does not support the theory about the relationship between employee performance, level of autonomy, feedback quality, communication process and communication tools.

TABLE 0-8: Summary of Hypothesis Testing Results

Hypothesis	Variable	t Value	Results
H1	Level of Autonomy	.707	Rejected

H2	Feedback quality	.110	Rejected
H3	Communication Process	.531	Rejected
H4	Work-Life Interference	.017	Not Rejected
H5	Communication tools	.701	Rejected

4.5.2 Interpretation of The Findings

Correlation analysis of employee performance and Work-Life Interference was found to be correlated. Hence H4 was supported. It is in line with Fisher (2001), that high level of Work-Life Interference led to a host of strains, including higher stress, job dissatisfaction, life dissatisfaction, lack of organizational commitment, and job turnover. Level of Autonomy and Communication tools was found to be correlated. This is in line with several studies about the drawback of high level of autonomy. There are no boundaries between work and non-work times which led to intensified working and longer working hours, which led to high level of stress from Communication tools (Maria, Christine, Carlo & Evie 2018). Also, low level of autonomy and control will lead the user to have higher levels of anxiety, frustration, and stress (Hair, Renaud & Ramsay 2007). Feedback quality and Communication Process was found to be correlated. According to Dixit (2018), the feedback is part of the Communication Process. Communication Process and Communication tools was found to be correlated. This is in line with so called communication management system in the literatures. Where companies start to prevent technostress through positive communication Technologies (Brivio et al. 2018).

The research findings agree with the theory proposed by study about teleworking (Baert, Lippens, Moens, Sterkens & Weytjens 2020) there was no work-life interference during this work arrangement. In their conclusion, they found out that 64.6% think that teleworking improves their work-life balance. This is in line with the findings of previous studies (Maria, Christine, Carlo & Evie 2018).

4.5.3 Implications

The data provide new evidence of that the organizations should still look for work-life balance Initiatives or practices. There are many strategies that organizations used to implement these Initiatives. A few examples are: flexible leaves, relaxing spaces in the workplace, flexible scheduling, Unpaid family leave and teleworking. According to fisher (2001), absence of work-life balance practices could promote strains, including higher stress, job dissatisfaction, life dissatisfaction, lack of organizational commitment, and job turnover. Work-life balance Initiatives have been proven by the scholars which could improves the organizations performance (Doherty 2004; Lazar, Osoian & Ratiu 2010; Smith & Gardner 2007). Work-life balance should be taken into consideration when the teleworking arrangement is implemented.

4.5.4 limitations

Limitations of the study include the number of data collected. Although the respondent rate was 79%, the number of total responds compared to number of questions in the survey was low. There is no definitive answer to how large the sample should be, but large samples are more powerful as they will yield more accurate results. However, data collection and analysis will be proportionately more time consuming and expensive (KELLEY 2003). To have a good sample size, researchers prefer to have minimum multiplier of 10 for questionnaire number of items, which means that 480 respondents is the minimum for our survey. However, 100 responses are probably needed even for marginally acceptable accuracy (van Bennekom 2018).

4.5.5 Suggestions and Recommendations

From a theoretical perspective, this study established that a statistical relationship exists between teleworkers performance and Work-life interferences in the engineering profession. Further studies are necessary to expand this study into more working fields. Also, the theoretical frame work of this study should be investigated more widely.

CHAPTER 5
CONCLUSION

It have been argued throughout this research, that working remotely has an effect on employees performance. In particular, the organization's performance during the COVID pandemic at engineering and industrial sector in UAE. I formed a theoretical framework based on the history and literature search about the relation between the employee performance and working remotely. Major factors were chosen to link the individual performance to the organization performance. The factors are: autonomy, feedback, communication process, Work-Life balance and communication tools.

5.1 Major Findings

Although with the obstacle to collect the data, I can summurize the findings into two major points. The first point was concluded from the descriptive statistics, that the employee performance, autonomy level, feedback quality and communication process had a positive impact at employees performance during the pandemic. The second point was concluded from the regression findings, that there is a relationship exists between employee performance and work-life Interference at the engineering and industrial sector. Work-Life Interference were the only predictor that is statistically significant in predicting employee performance.

Based on the comment section in this survey, it shows that people perception are inline with literature search. The comments was generally about: Work-Life balance, flexibility, money and time saving and road traffic jamming. My recommendation is to explore wider in this work arrangement, since it shows a positive effect in different work fields.

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Appendix A

Employee Performance Scales

1. My tasks are performed carefully and correctly
2. My tasks are completed as per the specifications and standards
3. Quality inspection is conducted before the delivery of goods or services
4. Our products or services meet the expectations of customers
5. The productivity outcome is in sync with the number of employees
6. The productivity outcome meets your organization expectations
7. The productivity outcome under my responsibility corresponds to my skills and ability
8. The task quantity assigned to me is always fulfilled
9. My tasks are normally completed on schedule
10. My tasks are carried out within a reasonable amount of time
11. Our delivery of goods or services are conducted in a timely way
12. Co-workers achieve time-related organization goals on time

Level of Autonomy Scales

1. I am allowed to decide how to go about getting my tasks done
2. I am able to choose the way to complete my tasks
3. I am free to choose the methods used in carrying out my tasks
4. I have control over the time scheduling of my tasks
5. I am free to choose the sequencing of my activities
6. My job allows me to decide when to do particular task activities
7. My job allows me to modify the normal way we are evaluated so that I can highlight some aspects of my job and play down others
8. I am able to modify what my job objectives/tasks are (what I am supposed to accomplish)
9. I have some control over what I am supposed to accomplish

Feedback Quality Scales

1. My manger gives me useful feedback about my job performance
2. The performance feedback I receive from my manger is helpful
3. I appreciate the feedback I receive from my manger
4. The feedback I receive from my manger helps me to do my tasks
5. The performance feedback I receive from my manger is generally not very meaningful to me.

Communication Process Scales

1. My manger provides sufficient amount of useful information that I understand
2. My manger shares information and responds to me in a timely manner
3. My manger carefully listens to my viewpoints and respond to it
4. My manger always speaks politely and this motivates me to model him/her
5. I know what is expected from me by my manger when I am given the tasks at work
6. My manger keeps essential information flowing to me

Work-Life Balance Scales

1. I am unable to relax at home because I am busy with my tasks
2. I often have to make a difficult decision between my tasks and my personal life
3. I have to put aspects of my personal life on hold because of my tasks
4. I often neglect my personal needs because of the demands of my tasks
5. My personal life suffers because of my tasks
6. My personal life drains me of the energy I need to do my tasks
7. My tasks suffer because of everything going on in my personal life
8. I am exhausted to be fully focused at work because of things I have going on in my personal life

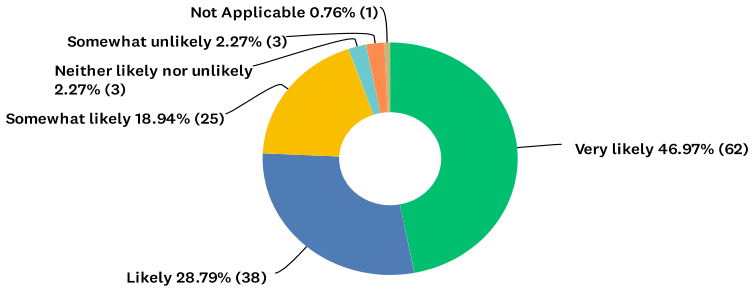
Communication Tools Scales

1. I am forced by this work arrangement to do more work than I can handle
2. I am forced by this work arrangement to work with very tight time schedules
3. I am forced to change my personal habits to adapt this new work arrangement
4. I have to be always available due to this work arrangement
5. I feel that my personal life is being invaded by this work arrangement
6. I don't have enough information about this work arrangement to handle it satisfactorily
7. I do not find enough time to study and improve my technology skills
8. I feel that Co-workers know more about this work arrangement than I do

Appendix B

Q1 My tasks are performed carefully and correctly

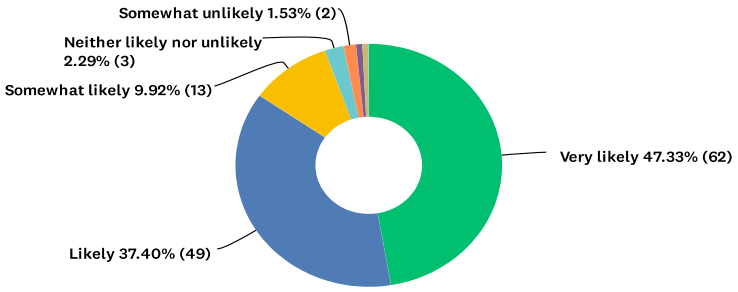
Answered: 132 Skipped: 1



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	1.88	1.10

Q2 My tasks are completed as per the specifications and standards

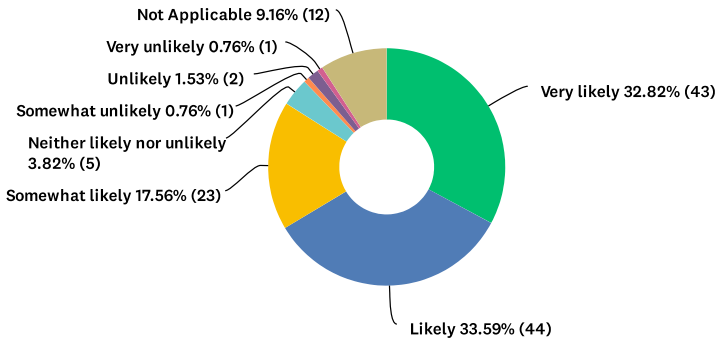
Answered: 131 Skipped: 2



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	1.79	1.08

Q3 Quality inspection is conducted before the delivery of goods or services

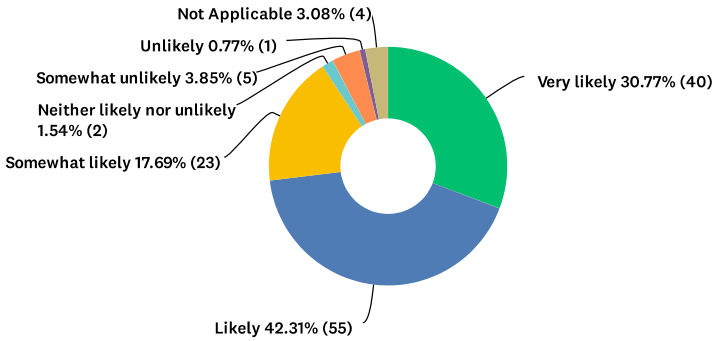
Answered: 131 Skipped: 2



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.60	2.03

Q4 Our products or services meet the expectations of customers

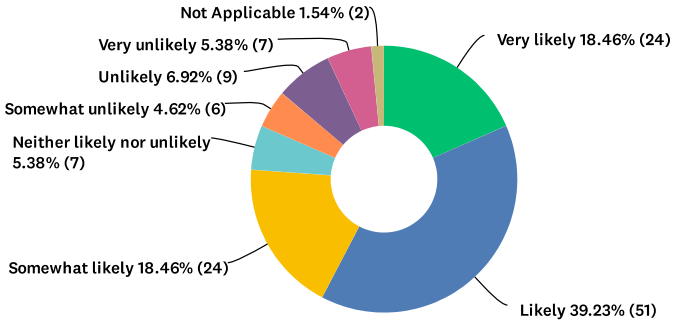
Answered: 130 Skipped: 3



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.23	1.44

Q5 The productivity outcome are in sync with the number of employees

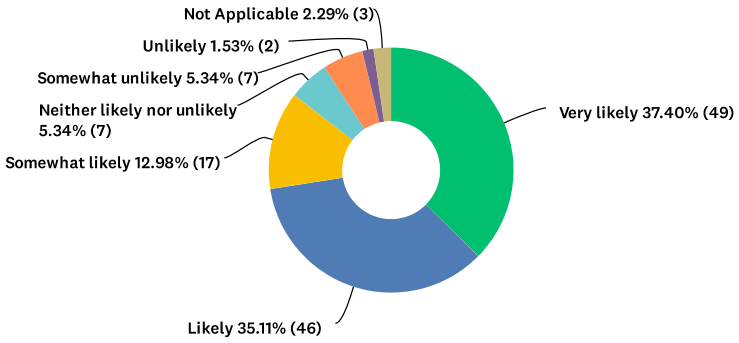
Answered: 130 Skipped: 3



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.88	1.80

Q6 The productivity outcome meet your organization expectations

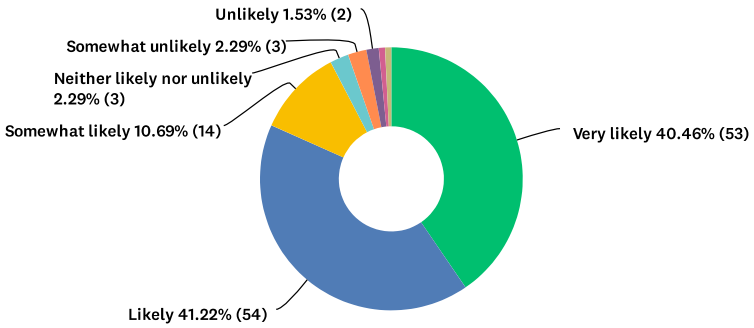
Answered: 131 Skipped: 2



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.22	1.49

Q7 The productivity outcome under my responsibility correspond to my skills and ability

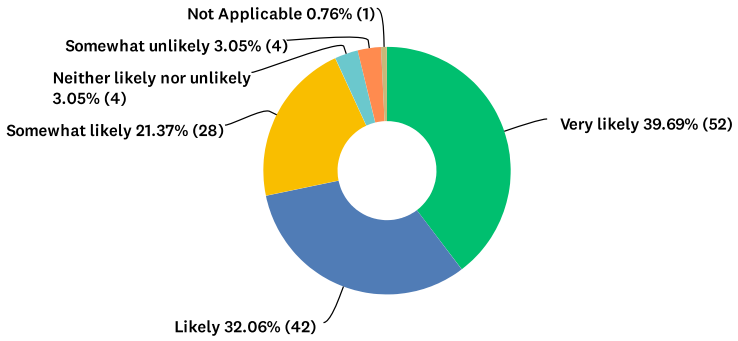
Answered: 131 Skipped: 2



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	1.96	1.23

Q8 The task quantity assigned to me is always fulfilled

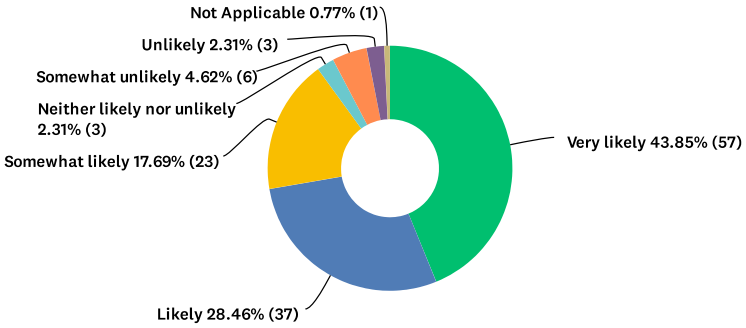
Answered: 131 Skipped: 2



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.02	1.13

Q9 My tasks are normally completed on schedule

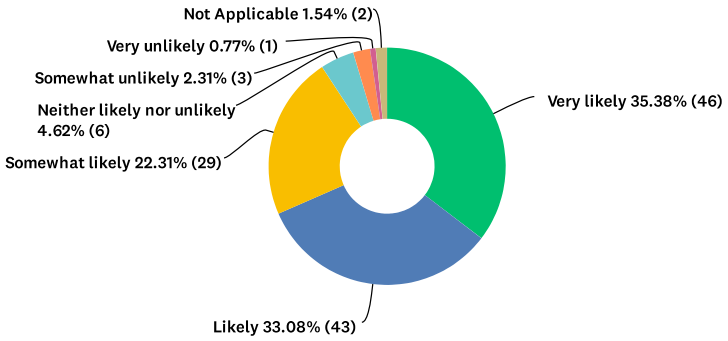
Answered: 130 Skipped: 3



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.06	1.33

Q10 My tasks are carried out within a reasonable amount of time

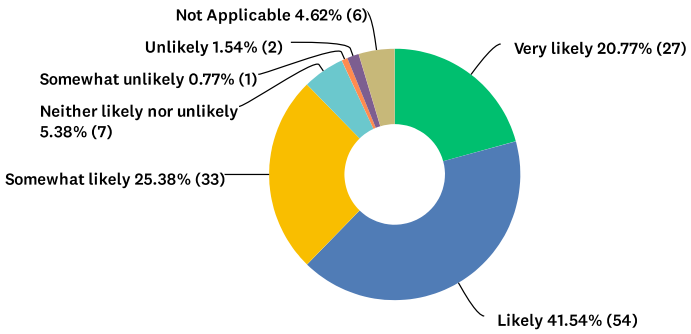
Answered: 130 Skipped: 3



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.16	1.30

Q11 Our delivery of goods or services are conducted in a timely way

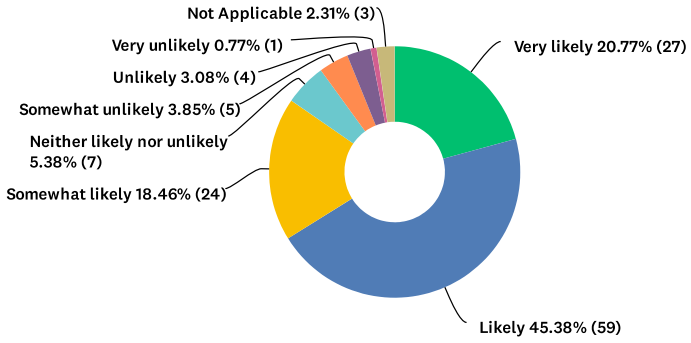
Answered: 130 Skipped: 3



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.52	1.55

Q12 Co-workers achieve time-related organization goals on time

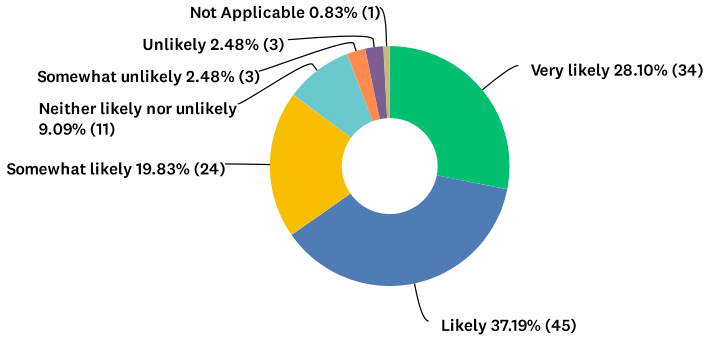
Answered: 130 Skipped: 3



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.50	1.49

Q13 I am allowed to decide how to go about getting my tasks done

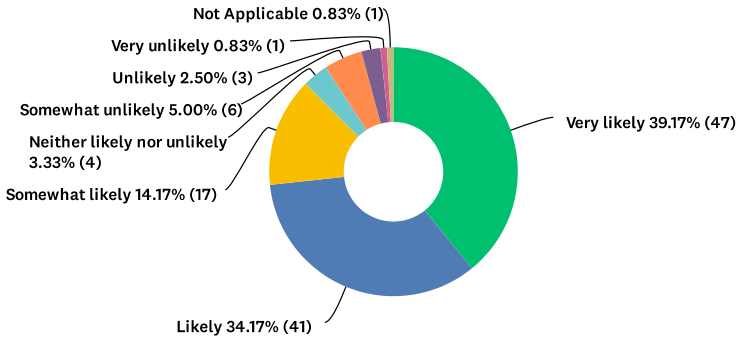
Answered: 121 Skipped: 12



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.32	1.29

Q14 I am able to choose the way to complete my tasks

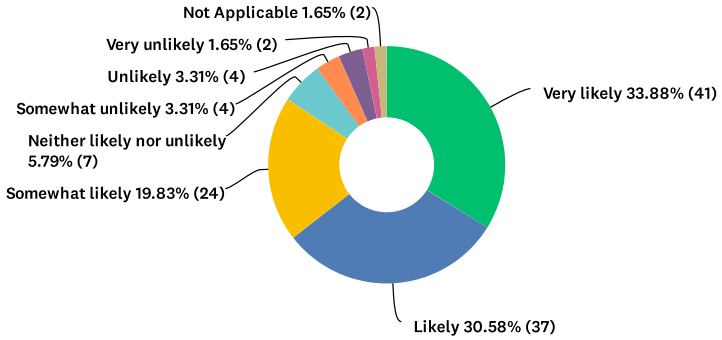
Answered: 120 Skipped: 13



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.16	1.41

Q15 I am free to choose the methods used in carrying out my tasks

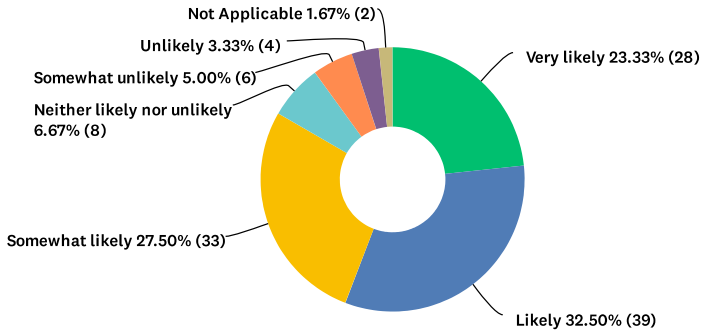
Answered: 121 Skipped: 12



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.39	1.57

Q16 I have control over the time scheduling of my tasks

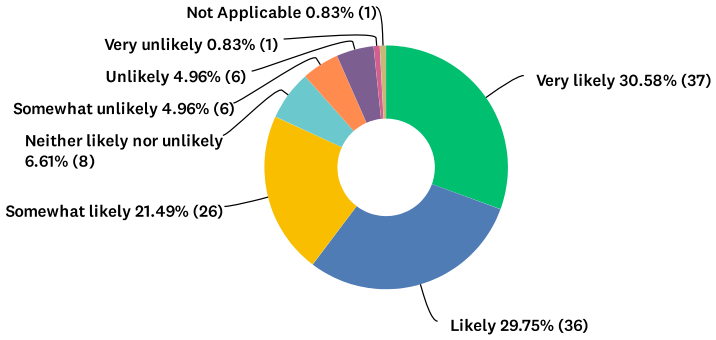
Answered: 120 Skipped: 13



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.56	1.43

Q17 I am free to choose the sequencing of my activities

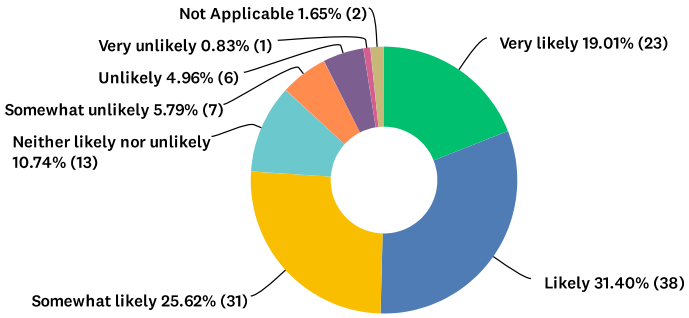
Answered: 121 Skipped: 12



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.48	1.52

Q18 My job allows me to decide when to do particular task activities

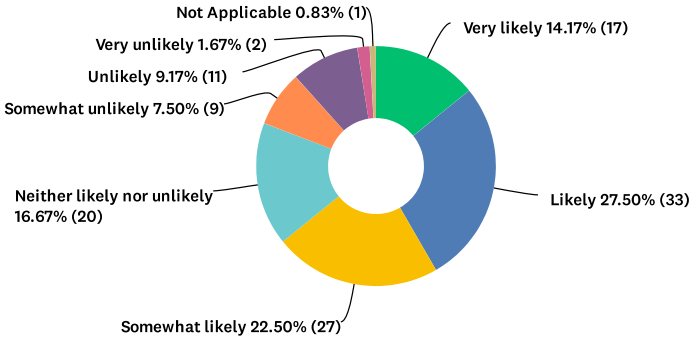
Answered: 121 Skipped: 12



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.79	1.54

Q19 My job allows me to modify the normal way we are evaluated so that I can highlight some aspects of my job and play down others

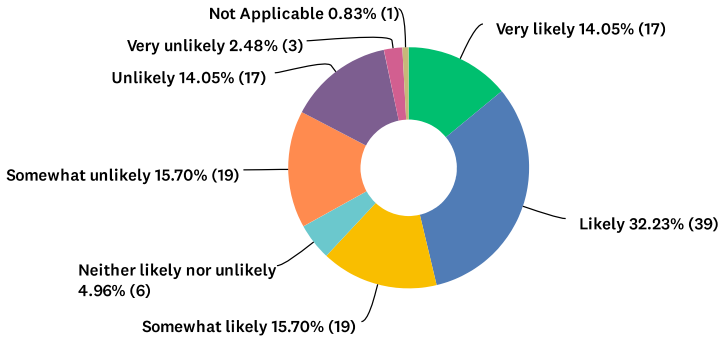
Answered: 120 Skipped: 13



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	3.00	3.14	1.61

Q20 I am able to modify what my job objectives/tasks are (what I am supposed to accomplish)

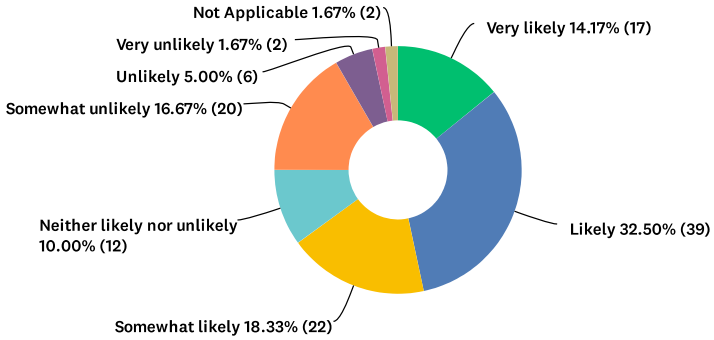
Answered: 121 Skipped: 12



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	3.00	3.32	1.82

Q21 I have some control over what I am supposed to accomplish

Answered: 120 Skipped: 13

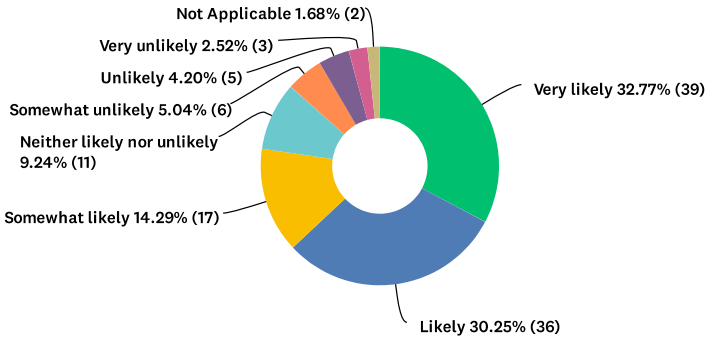


BASIC STATISTICS

Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	3.00	3.13	1.67

Q22 My manger gives me useful feedback about my job performance

Answered: 119 Skipped: 14

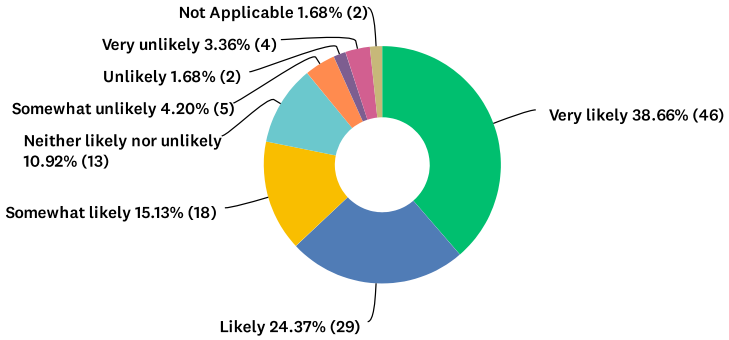


BASIC STATISTICS

Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.55	1.70

Q23 The performance feedback I receive from my manger is helpful

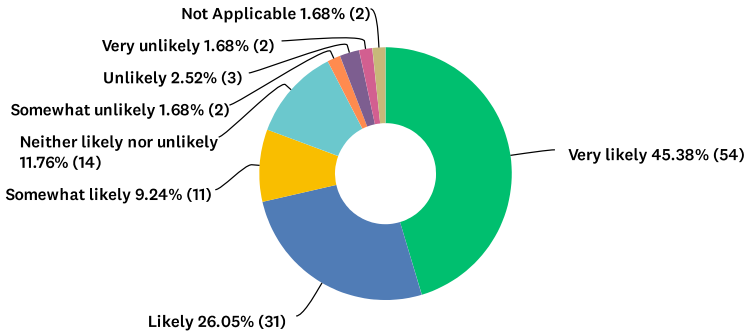
Answered: 119 Skipped: 14



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.45	1.69

Q24 I appreciate the feedback I receive from my manger

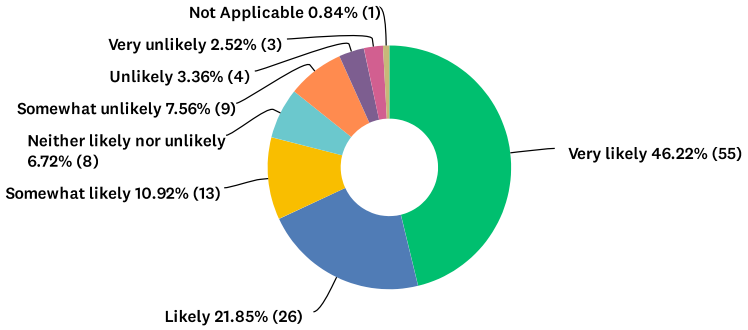
Answered: 119 Skipped: 14



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.21	1.60

Q25 The feedback I receive from my manger helps me to do my tasks

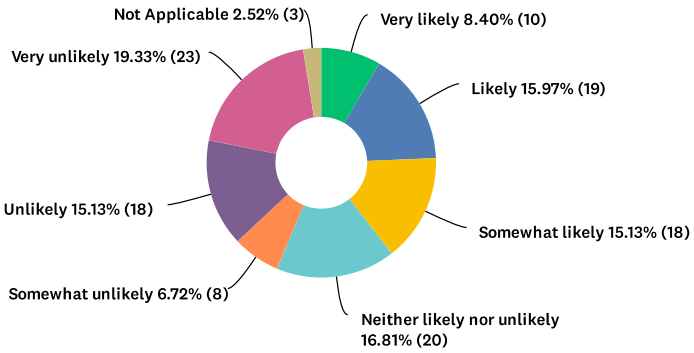
Answered: 119 Skipped: 14



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.32	1.70

Q26 The performance feedback I receive from my manger is generally not very meaningful to me

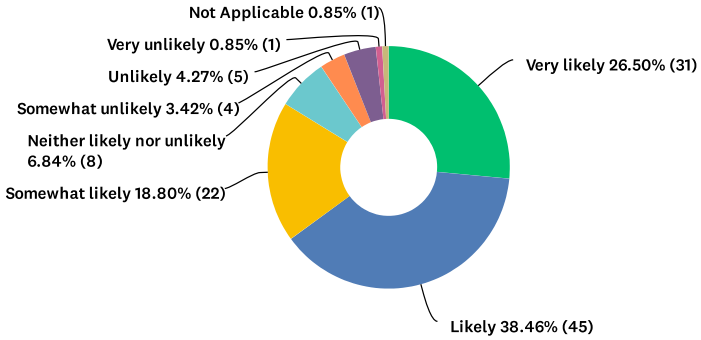
Answered: 119 Skipped: 14



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	4.00	4.33	2.06

Q27 My manger provides sufficient amount of useful information that I understand

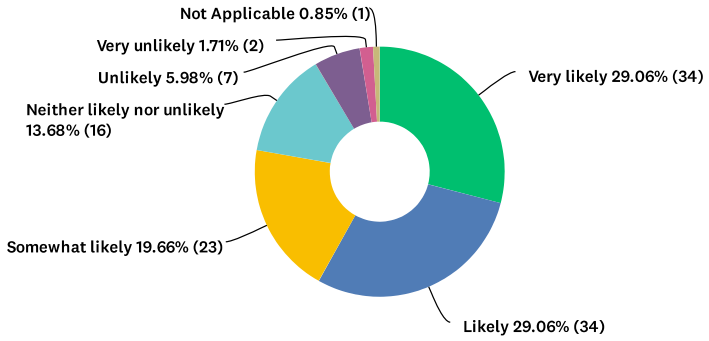
Answered: 117 Skipped: 16



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.43	1.43

Q28 My manger shares information and responds to me in a timely manner

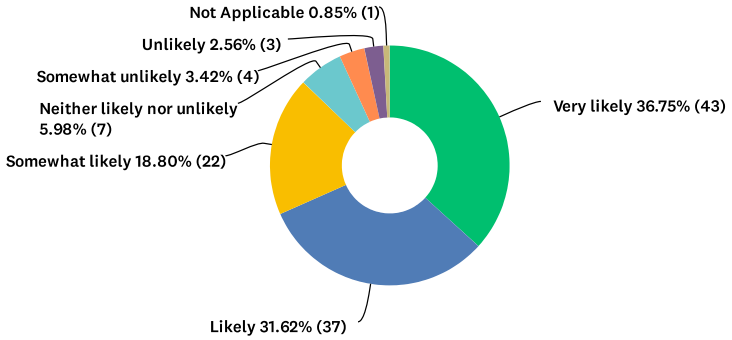
Answered: 117 Skipped: 16



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.56	1.55

Q29 My manger carefully listens to my viewpoints and respond to it

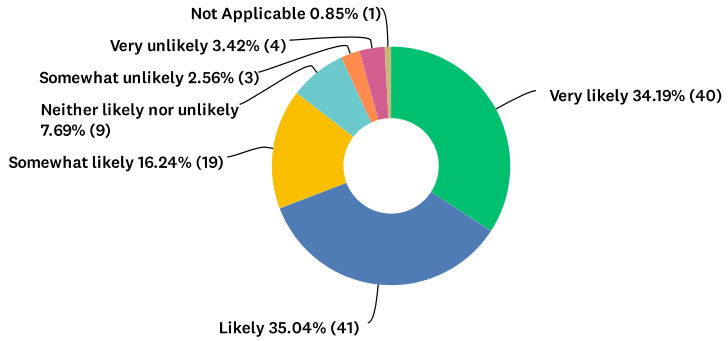
Answered: 117 Skipped: 16



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.20	1.33

Q30 My manger always speaks politely and this motivates me to model him/her

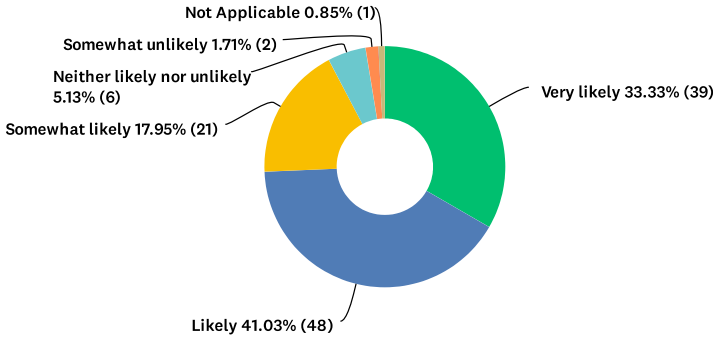
Answered: 117 Skipped: 16



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.27	1.46

Q31 I know what is expected from me by my manger when I am given the tasks at work

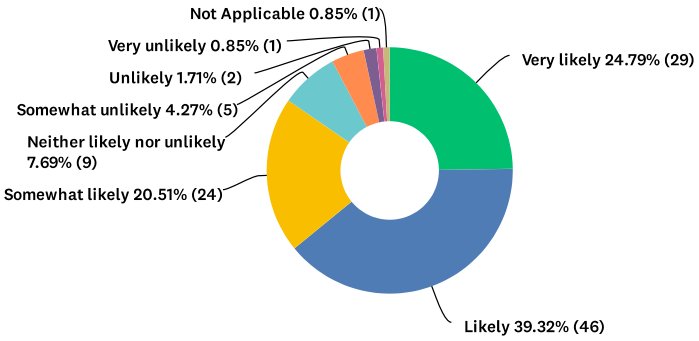
Answered: 117 Skipped: 16



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.05	1.08

Q32 My manger keeps essential information flowing to me

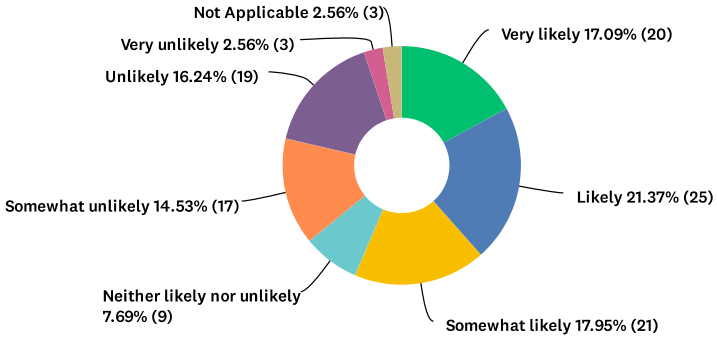
Answered: 117 Skipped: 16



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	2.00	2.40	1.33

Q33 I am unable to relax at home because I am busy with my tasks

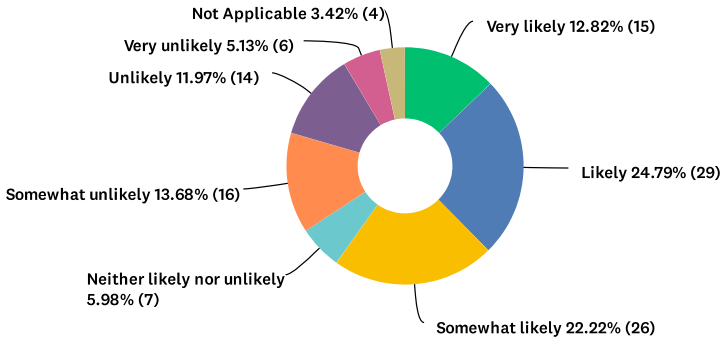
Answered: 117 Skipped: 16



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	3.00	3.53	1.95

Q34 I often have to make a difficult decisions between my tasks and my personal life

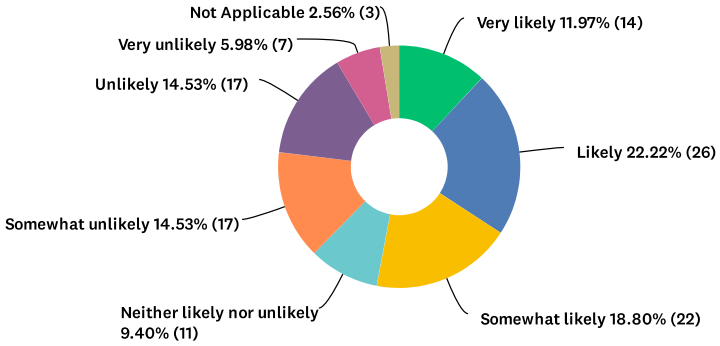
Answered: 117 Skipped: 16



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	3.00	3.56	1.95

Q35 I have to put aspects of my personal life on hold because of my tasks

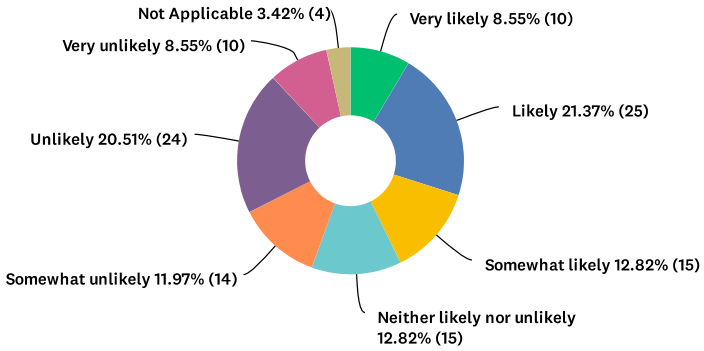
Answered: 117 Skipped: 16



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	3.00	3.73	1.94

Q36 I often neglect my personal needs because of the demands of my tasks

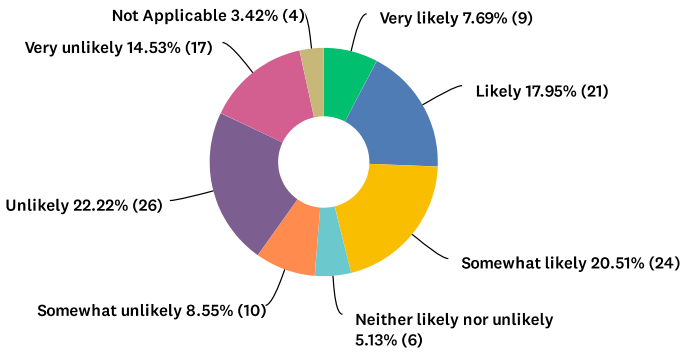
Answered: 117 Skipped: 16



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	4.00	4.11	2.00

Q37 My personal life suffers because of my tasks

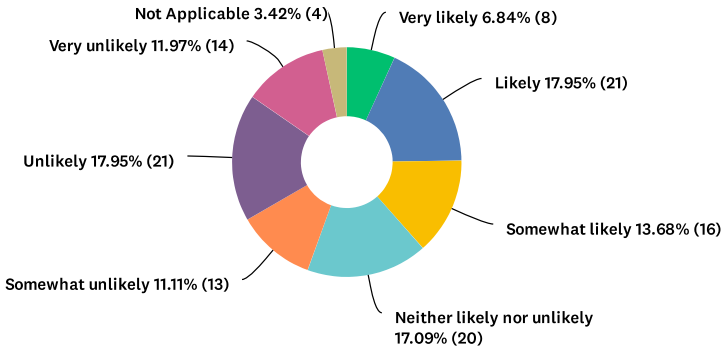
Answered: 117 Skipped: 16



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	4.00	4.31	2.09

Q38 My personal life drains me of the energy I need to do my tasks

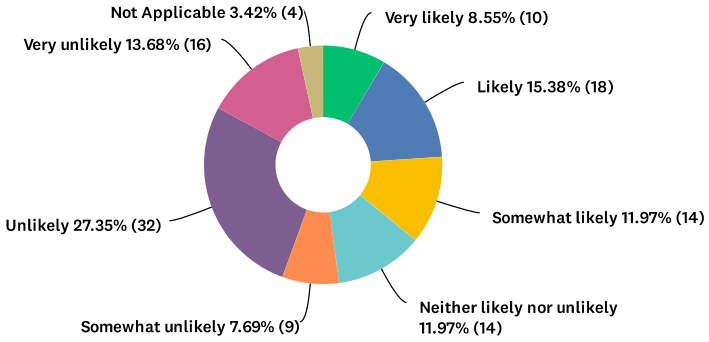
Answered: 117 Skipped: 16



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	4.00	4.26	1.96

Q39 My tasks suffer because of everything going on in my personal life

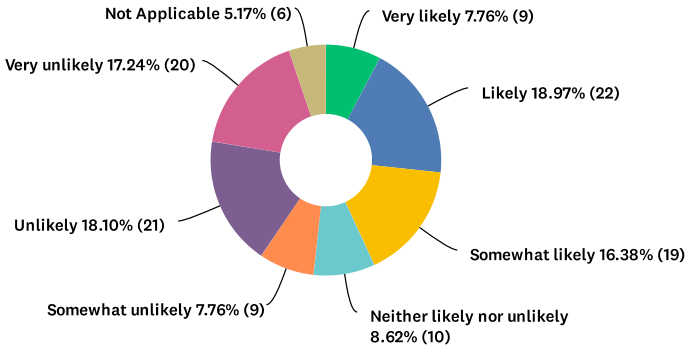
Answered: 117 Skipped: 16



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	5.00	4.49	2.05

Q40 I am exhausted to be fully focused at work because of things I have going on in my personal life

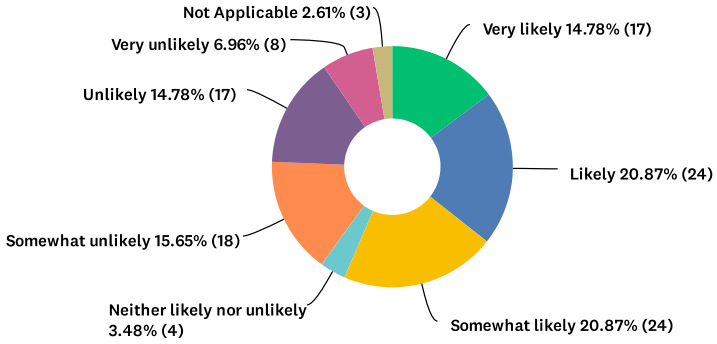
Answered: 116 Skipped: 17



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	4.00	4.39	2.16

Q41 I am forced by this work arrangement to do more work than I can handle

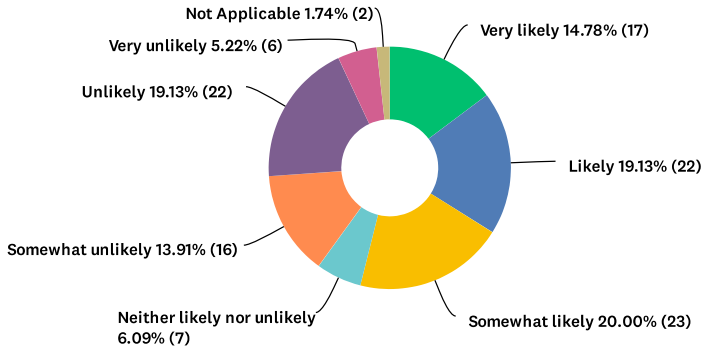
Answered: 115 Skipped: 18



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	3.00	3.70	2.02

Q42 I am forced by this work arrangement to work with very tight time schedules

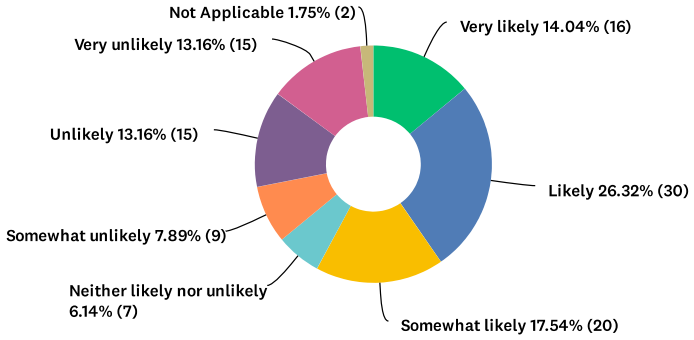
Answered: 115 Skipped: 18



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	3.00	3.72	1.97

Q43 I am forced to change my personal habits to adapt this new work arrangement

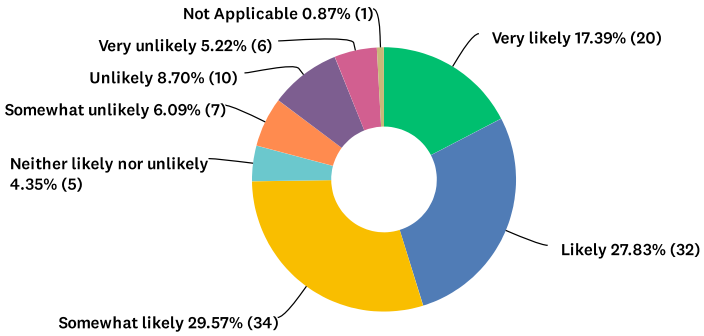
Answered: 114 Skipped: 19



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	3.00	3.68	2.11

Q44 I have to be always available due to this work arrangement

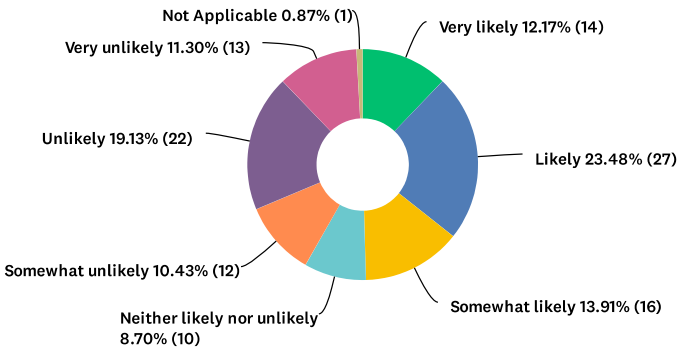
Answered: 115 Skipped: 18



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	3.00	3.05	1.76

Q45 I feel that my personal life is being invaded by this work arrangement

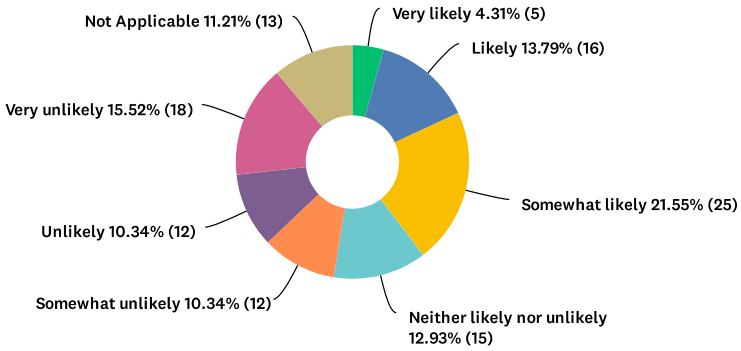
Answered: 115 Skipped: 18



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	4.00	3.89	2.05

Q46 I don't have enough information about this work arrangement to handle it satisfactorily

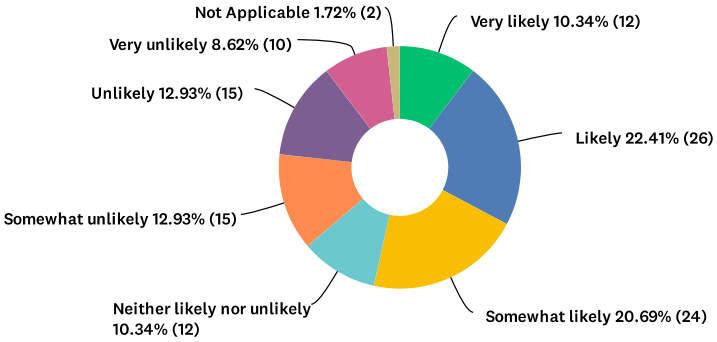
Answered: 116 Skipped: 17



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	4.00	4.60	2.12

Q47 I do not find enough time to study and improve my technology skills

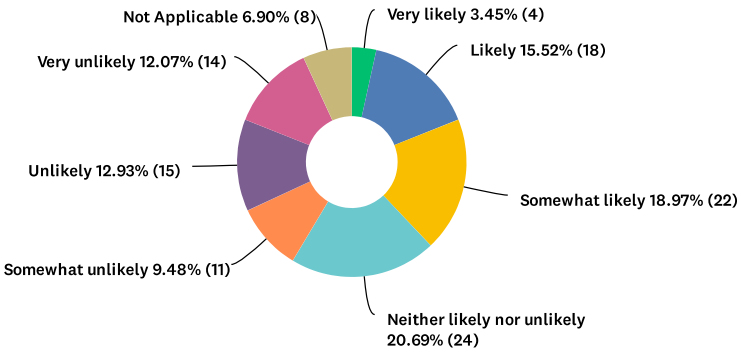
Answered: 116 Skipped: 17



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	3.00	3.75	1.92

Q48 I feel that Co-workers know more about this work arrangement than I do

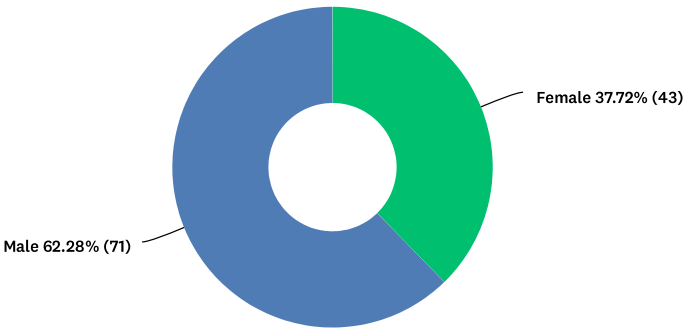
Answered: 116 Skipped: 17



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	8.00	4.00	4.39	1.94

Q49 What is your gender?

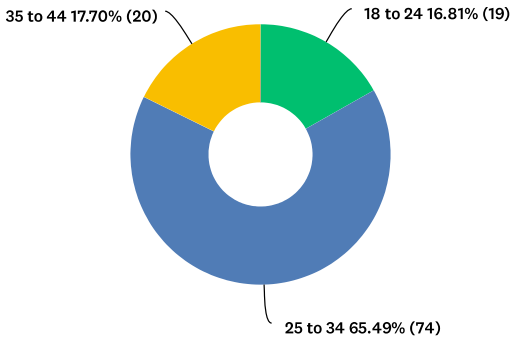
Answered: 114 Skipped: 19



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	2.00	2.00	1.62	0.48

Q50 What is your age?

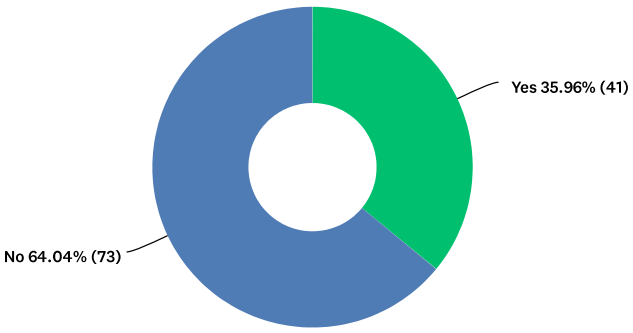
Answered: 113 Skipped: 20



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	3.00	2.00	2.01	0.59

Q51 Do you have any children?

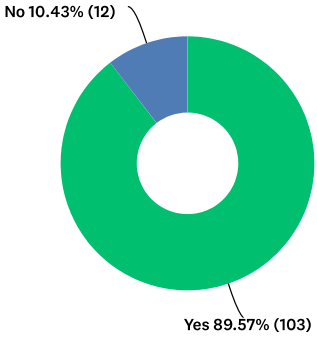
Answered: 114 Skipped: 19



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	2.00	2.00	1.64	0.48

Q52 Have you worked remotely?

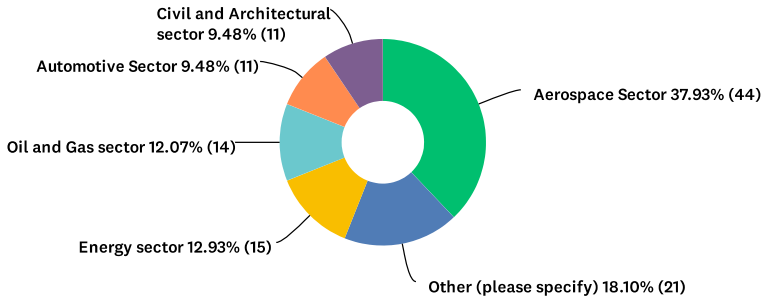
Answered: 115 Skipped: 18



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	2.00	1.00	1.10	0.31

Q53 Your field of work

Answered: 116 Skipped: 17



BASIC STATISTICS				
Minimum	Maximum	Median	Mean	Standard Deviation
1.00	6.00	3.00	3.04	1.96

Q54 Do you have any other comments?

Answered: 29 Skipped: 104