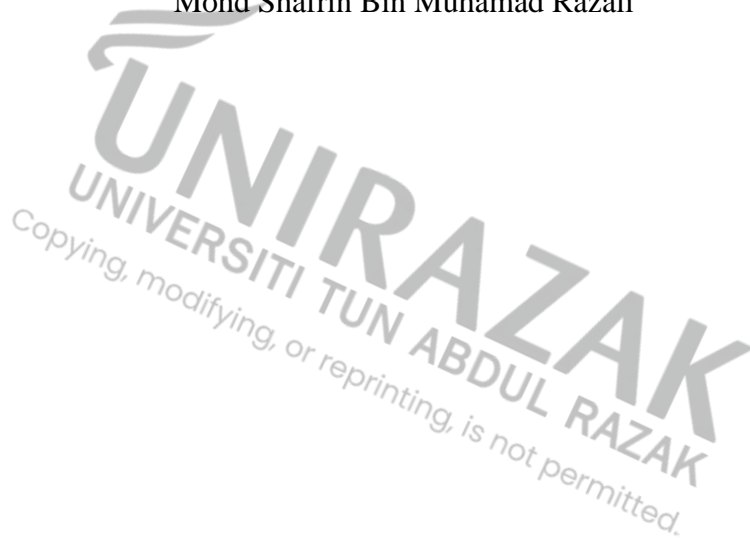


Job Demand-Control-Support Model Relationship with Worker's Happiness
in a Manufacturing Company

By

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Project Paper Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Business Administration
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June 2021

DECLARATION

The author hereby declares that this project paper is the original study undertaken by him unless stated otherwise. The acknowledgement has been given to references quoted in the list of references. The views and analysis in this study are that of author's, based on the references made, and this does not constitute an invitation to use this study as a technical tool for management purpose.



Signature :

Name : Mohd Shafrin Bin Muhamad Razali

Date :

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Abstract of the project paper submitted to the Senate of Universiti Tun Abdul Razak in partial fulfillment of the requirements for the Master of Business Administration.

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The psychological stress topics have close relation with every working adult. In fact, this could lead to mental health issue which is should not be taken lightly. The consequence can extend into the community until national concern. Most employers in Malaysia is aware regarding the issue, but lack of business or organization ethics could lead to the ignorance towards the topic. However, by understanding our mental condition and the environment that we are living in could help to empower ourselves as well as the others. We could have more awareness towards the stress and mental health. Job demand, job control and job support model were widely use to access workers stress. Therefore, the objectives of the study is to determine the relation of Job demand, job control and job support with workers happiness condition at workplace.

Method: Evaluation and cross-section analysis was done through survey questionnaire which adopted from previous researcher related to the job demand, control and support incident at workplace. Total of two hundred and thirty five workers aged between 18 to 49 years old took part of the study. They are working in same electronic components manufacturing factory.

As result; Job support is having statistically significant negative correlation with the workers happiness condition, ($r = -.202$, $p = .002$). While job demand found have no significant correlation with the workers happiness ($r = .78$, $p=.233$) and job control is having positive correlation with workers happiness ($r = .224$, $p = .001$).

In conclusion, the study was able to conclude that job support have significant relation towards worker happiness condition. While positive job control correlation have reduce the affect from job demand towards workers psychological condition. The knowledge that explored in the research hopefully can be used to prevent the negative environment and enhancing existing health support system. Let's have a mindset to 'prevent and protect' ourselves and others.

CHAPTER 1

INTRODUCTION

1.0 Background of the Study

If you ever feel down and worried, and has lost the pleasure in daily activities for at least two weeks or more, beware! You might be diagnosed with depressive disorder or simplified as depression. Those are the symptoms on someone with these particular mental disorder. Depression could be result from mediating of one stress factors. Mental illness are similar to physical illness that taken its place anywhere on the scale from good to bad. The effect of mental illness could extend to one's fatality. In Malaysia, most adult spending one third of their time working or being at the workplace. Those significant of time are likely exposing ones to several mental stress or depression factors. Therefore, it is important for the employers to aware and properly address this issue in preparing healthy workplace as well as improving the wellbeing of their employees.

Mental illness can be manifested from intrinsic factors which is from the individual itself or extrinsic factors which is from the environment or situation that the person are facing. (Dr. Angelita C. Serrano, 2019) implies that stress can be observed through 3 aspects; physical, psychological and behavioral changes. Physically stress symptoms can be shown in the form of insomnia, headaches or stomachaches. While feeling of being depressed, losing focus and weakened decision making ability are the signs for psychological effects. In other hand, when individual starting to away from work frequently, always irritable over something or mood swings are the alarm for behavioral symptoms. Presented research will provide the spotlight on the stress factors that could affecting employee mental health condition.

(Porter, Susann, Lexén, Annika, Bejerholm, Ulrika, 2019) In today's working age population, mental health problems are one of the cause of workers taking sick leave or absent from work. In worse situation, effected employee will involve in disciplinary issue at the workplace. This environment can disrupt the company productivities, co-worker relationship and corporate image. Thus, it is one of the employer's responsibility to provide conducive work environment and preventing work-related mental illnesses. Unfortunately, employer's knowledge in regards of mental health problems is lacking. This is because comprehending mental health problems is complex without its expert assistance. This situation will lead to lack of established conditions to support work. Depression factors that can emerge at workplace or during work activities need further exploration. Many of high scale industries such as manufacturing are adopting Environment, Health and Safety (EHS) department to provide better management system for the company operation.

Job demand, job control and job support which suggested by (Karasek & Theorell, 1990) in their Job-Demand-Control-Support model were used to distinguish potential factors that exist at workplace. Those three categories can be explored to identify bad work environment that soon will manifest into bad work culture in the matter of time. Job demand giving insight how job workload, unrealistic dateline, extended working hour, or excessive responsibility can do the harm towards employee mental wellness. While job control suggest that employees were having more freedom in making decision on how they would perform their work as long as it does not interfere with the job scope. Have more control over the work, can ease the mental stress as employee were able to make arrangement according to their current capability. In other hand, job support are affecting directly from the supervisor and co-worker relation. A good communication and professionalism attitude with each other contribute significant effect towards employee stress level.

Job Demand-Control-Support model was widely use as tool to determine or producing investigation framework on recognizing mental illness in workplace. Many previous researcher are using Job Demand-Control-Support model to investigate the stress, depression and anxiety among Malaysian. For example, (Jignyasu Prafullav Joshi, Nabsiah Abdul Wahid, 2018) is using the JDCS model within Malaysian construction industry employee. In their findings, they were able to propose that Job demand, control and social support are the determinant factors for individual stress in an organization. (Alan K. Goodboy, Matthew M. Martin, Jennifer M. Knight, Zachary Long, 2015) raised the concern regarding workplace bullying using the correlation study through job demand, control and support. Employee who work in high psychological demand, low work control and less supervisor social support were prone on more workplace bullying environment.

Manufacturing sector in Malaysia continue its growth and provide major contribution in this country economics. Manufacturing sector growth was also supported positively by the government which is shown by the effort from our International Trade and Industry Ministry to launch the National Policy on Industry 4.0 in 2018 (The Star, 2020). In technology based manufacturing organization, the work environment could be demanding for both physically and mentally competency from their employees. It is due to the business challenges to compete in the fast pace technology through development and new product introduction. According to (Steven C. Wheelwright & Kim B. Clark, 1992), “Firms that get to market faster and more efficiently with products that are well matched to the needs and expectations of target customers create significant competitive leverage”. Those, it is perceive that manufacturing company which involved in technology products business are having highly stress workplace environment. By that interest, the research was built inside those particular organization in Perak, Malaysia. An electronic manufacturing company that produce telecommunication and networking assembly units was picked and their organization was used for the sake of the study.

Based on 2019 National Health and Morbidity Survey, national prevalence of depression was at 2.3%. In other hand, as per AIA Vitality survey conducted in 2019, they found that 51% of 17,595 employees polled suffer from work-related stress which sees an increase trend from 2018(50.2%). In the economic page, the cost of mental health related problem at workplace towards the economy are estimated to be RM 14.46 billion in year 2018. Malaysia are losing 73.3 working days per year in regards of employee attendance issue in 2019. At global scale, more than 300million people are suffering from depression or estimated \$1 trillion each year in term of productivity losses. (Corbière, Marc; Bergeron, Geneviève; Negrini, Alessia; Coutu, Marie-France; Samson, Esther; Sauvé, Geneviève; Lecomte, Tania, 2018), mentioned depression was recognized as one of the major causes of work disability in today's world.

“Employers duty shall extend to include the maintenance of plants and systems of work that are safe and pose no risk to the health of their employees” - Malaysian Occupation Safety and Health Act 1994 (OSHA 1994).

“Mental health is defined as a state of a well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and able to make a contribution to her or his community” – World Health Organization (WHO).

1.1 Problem Statement

Workplace is a place where most of the working adult spending most of their life-time. Therefore, any potential stressor at workplace could impact a person mentally and emotionally. Worst case scenario, constant exposure to psychological stress can cause mental illness. This will affect individual work performance, lower productivity and producing negative behavior that may influence others. “Low levels of employee wellbeing can also adversely affect both workers and their organization” (R.Zirwatul, 2012). Although, a good stress can encourage employees to be productive, the level could be differ from one individual to the others. Ideally, organization that can work with the factors exclusively to each of their employee can fully optimized their operation productivity.

In manufacturing company especially those are involved in technology business were perceived to have highly stress workplace. It is due to rapid changes in technology and competitive market. This type of industry are racing with time, innovation, production efficiency, resource issue, human capital and many other factors to produce their products according to the current market demand. Being ignorance towards the emerging problem in the company was never a good choice. As employers, their employee’s mental state should be address in professional manners. This issue should not be taken lightly. Employees should always be seen as valuable living assets for an organization.

While mental stressor in workplace are unavoidable, a proper method to identify and measure need to be recognized. Any factors that could potentially affect the employee or their work environment cannot be tolerated. Knowing the psychological factors and its relation with worker’s happiness condition is one step towards creating healthy work environment where every level of employee could perform at their best. In this new digital era where information can easily be accessed, every employers have no excuse for not learning the ways of managing their employee’s mental well-being. According to Malaysian law, providing safe and healthy workplace are one of employer’s

responsibility. In extend, employee's mental wellness or happiness can give significant impact into the society's wellbeing as well.

1.2 Research Objectives

In this research, there is three main objective to be achieved.

- a. Determine the relation of Job demand with workers happiness condition at workplace.
- b. Determine the relation of Job control with workers happiness condition at workplace.
- c. Determine the relation of Job support with workers happiness condition at workplace.

This study will help to evaluate the relation of factors that contribute towards employee psychological stress and its impact to their happiness. It can be informative findings for employers to take the preventive measurement or doing cross check on their existing work environment. In general, it giving the awareness to people so that they can react and response in the most professional ways.

1.3 Research Questions

This research was designed to study the psychological stress factor that happen in workplace and its relation with workers happiness condition. In other words, it is to investigate the derived factors extent to what level in affecting employee happiness condition. Three research questions was construct as below:

From the designed objective, the research are looking into the relevance questions to compliment the method that will be needed to archive the above objectives. The questions is the concern that researcher have over the topic. It has trigger researcher enthusiasm in pursuing the answers. Below are the questions that has construct to reach the objectives of the study.

1. What is the relationship of job demand with workers happiness condition?
2. What is the relationship of job control with workers happiness condition?
3. What is the relationship of job support with workers happiness condition?

Building the foundation from these questions, the research getting its development for the research method and its significant direction. It is to ensure the path is clear so that the research does not carried away by other interest during its progress. In other word, safeguarding the significant of the research study can be applied or used for future exploration. Beside these questions is to emphasize the main quest of the investigation.

1.4 Significance of the Study

The study bring in awareness to the employers regarding the existence of depression, anxiety and stress contributors in the workplace. Those psychological factors can always be the basic foundation to prevent or tackle the real situation. The implication, employers can provide and prepare more comprehensive work environment. Hence, it can promote great work responsibilities, healthier workplace and best organization culture.

It is expected, the result from the research will be able to provide guidance for any organization when shaping their health policies. While appropriate strategies can be implement in organization's stress management. It is to enhance healthy and safer workplace. In other hand, a significant communication can be drawn over job demand, control and support level that could help assessing employee's performance.

1.5 The Organisation of the Study

This research paper will divided into several chapters which organized according to research progression from start towards its end. It was managed in structural manners to map each process steps that has taken by researcher. Begin with the introductory chapter and end with the discussion of research result and conclusion. In this section, an overview of each chapters were provided to assist reader in understanding those particular contents in the whole research.

Chapter 1: Introduction

It will mark as the starting point of the research. It will give the general ideas about the research and how the research will be reporting in. This chapter will include background of the study, research objectives, research questions and significance of the study. Definition and research foundation are the key discussion in this chapter.

Chapter 2: Literature Review

We can find how existing research findings influence for this study and what will be this research looking into. This chapter will contain the literature review of the research. Job-Demand-Control-Support model as the theoretical underpinned and empirical research will be presented its relevance in specific sub-topic towards the development of proposed conceptual framework. Then, sub-topic hypothesis development will explain regarding the construction of the research hypothesis. Summarized of the chapter will be provided at the end of the section.

Chapter 3: Research Methodology

While in this chapter, it will provide the information regarding the research methodology that was carried out through the research progress. It will express in eight sub-topics. First, brief introduction about the research methodology that the study want to perform. Next, it offer in details about research design. Further in this section, the research will explain the population and sampling procedures that has taken to compliment research objectives and research question. Data collection method then will be present to show how data for the research will be gathered for future analysis in next steps of the research. Variables that related with the study will be discuss in the sub topic Operationalization and Measurement. The technique to analyze the data will be detailed in Data Analysis Technique sub-topic.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

New technology and its related products is changing rapidly in today trend. Between 2018 and 2019, there are around 200 million of new internet user emerge. It is about 6 new user emerge for every one second worldwide. In April 2021, 4.72 billion people around the world or 60% of world's total population is using internet (Datareportal.com). At the back stage of that reality, manufacturing company that involve in producing technology products are having intense environment to fulfill the market demand. They are fighting with time, cost and resources to introduce relevance products to cater customer need. As part of that, the workplace environment are very demanding. Stress level can be consider higher for this industry. While safer workplace can be physically re-model, healthy workplace that concern about mental wellness are quite subjective to measure.

Psychological matter at workplace

Some people are motivated through the challenge they facing within their workplace and environment. Seldom, we get confused by the term of good and bad stress by leaders. This somehow giving different ideas over the challenges one get in the workplace. Work challenges should able to energize us physically and psychologically. It will encourage those individual to obtain new skills or developing new muscle strength. This should be seen as empowerment context for individual. However, when stressors or pressure are excessive and constantly engage the employee's resources, capabilities and skills to cope should not perceived as a good stress, healthy pressure or whatever definition that trying to defend the negativity. Workers are already motivate to perform their job everyday they start it but could be discourage due to its environment. The type of good stress or bad stress argument need to be distinguish when the research were conduct. Rather, the study will focus on stressor that can impact individual psychology.

Early work-related stress theory was discussed in 1966 by Richard S. Lazarus, professor emeritus of psychology at University of California. (Lazarus, 1986) are proposing that stress is the direct output of a matter between ones and the environment they facing which may affecting and consuming their resources which threaten to their health. In his other research (Lazarus & Folkman, 1984), three types of stress are specify as harm, threat and challenge. When the damage involve psychological damage, or what can be describe as the loss caused by something that already happen. While threat is the anticipation of harm that may be imminent. Lastly, the challenge which results from demand to a person and making him or her feels confident about mastering it. This theory is relating individual with the environment that they are facing. This make it relevance that condition at workplace will be affecting individual psychological wellness.

Nurul Suhaida Sehat, Rozana Othman, Najihah Hanisah Marmaya, Wei Loon Koe, (2019) indicate that several factors can contribute towards job-stress. Work overload, role conflict, role ambiguity, and work-family conflict are among them. They are testing the antecedents of job stress relation with job stress. The outcome from the study was able to distinguish overload work, confliction roles at workplace, and ambiguity in one's role giving significant effect towards influencing job stress. It can be include in inference that most workplace are physically comply with safer workplace.

Job-Demand-Control-Support relation with Maslow's Theory

(Elizabeth Hopper, 2020), Maslow's hierarchy of needs by Abraham Maslow emphasize five categories of needs in hierarchy order; physiological, safety, love, esteem and self-actualization as motivation factors in his theory. People will progress through the hierarchy of needs starting from the physiological needs. As the need was fulfill and satisfied, they will move towards next category until the final category which is self-actualization.

The factors in Job-Demand-Control-Support was perceived to support and compliment Maslow's theory. Job demand factor was able to contribute towards physiological needs. The acceptable amount of work load and manageable individual stress level will increase employee satisfaction. However, exceed amount of work load and negative stress can decline the employee satisfaction.

In other hand, job control factors was able to connect with the safety category in Maslow's theory. The capability of individual to have control in their job implies the safety perimeter that they can set. Therefore, the satisfaction of the needs for safety were achieved. As the employee is climbing the hierarchy of needs, their motivational will be increased. An increase of motivation in the work they perform, the less psychological stress they will have.

Next category which is love and belonging are having direct relationship with job support. In job support, the support from supervisor and colleague in factors that contribute towards employee's stress level. The support ones received when performing their job can ease their psychological stress. Similar to the hierarchy of needs, where the need for love and belonging were satisfied with good relationship they have.

(Seligman, 2011) were emphasized that happiness could be analyzed into three different elements. Positive emotion, engagement and meaning. He suggested that these elements was more measureable than happiness. However, these elements was proposed to coming from the individual choice for their own sake. Unfortunately, in work environment not everyone can have of their own sake choices. Instead, it is more to fitting to the systems and encouraging the work environment to be pleasant and healthy.

2.1 Theoretical Foundation

There is a lot of research was done involving the stressor at workplace. However, one theories that was found to be interesting to be explored in this study context. Those theory that was replicate from the previous researchers will be used to build this research conceptual. It was called Job Demand-Control-Support (JDACS) theory. The JDACS model

was first brought out in 1979 by Karasek and his colleague. It was well-known model that enlightens how job characteristics influence employees' psychological well-being. Despite the model was criticized for a predominance of self-report versus objective measurement, cross-sectional rather than longitudinal study design.(Marcus J.Fila, 2016), the model is remain relevant as the foundation for researchers in accessing employees' psychological well-being up to this date.

Jingnyasu, Lavinsaa, Nabsiah, Hemalatha, (2019) in creating their research framework to find the determinants of competency to deal with work stress are using three independent variables. Increase control in job demands, enhancing job control and enhancing job support are the factor they use. This was bias towards the level of job demand, control and support to deal with work-related stress. The context that they use is from construction companies where the physical demand are high in their job. Their findings imply the importance and usefulness of Job Demand-Control-Support theory in explaining why workers are in stress condition.

Anja H.,Christopher P.,Hallgeir H.,Edward L.and Geoffrey C.,(2017) is suggesting changes in basic psychological need frustration will have associate positively with the change in stress. Then, the change in stress will positively affect to the changes in somatic symptom burden. While the changes in somatic symptom burden will increase the changes in emotional exhaustion, turnover intention and absenteeism as it increase. The basic psychological need frustration is the personal experiences regarding frustration of autonomy, competency to make self-feel adequate and relatedness or rejection relation at work. In this research, focus is on the loss in human capital in the form of absenteeism, turnover employee and reduced employee's job performances.

Jose Joaquin, Antonio Ariza-Montes, Francisco Fernandez and Horacio Molina(2018) is also seen to using Job Demand, Control, Support theory in preparing their research framework. Their research objective is to know the occupational health as an accountant. They are using the JDCS theory and modified it to overview the relationship of certain stress factors that affect the accountant's health. However, the definition of job support in this research was extend to the client relations with the accountant.

2.2 Empirical Research

This study was based on quantitative research. Analytical data was gathered through survey questionnaire. Respondent feedback will be used to quantify the research hypothesis based on the structural questionnaire develop for the study. Each research objectives and research questions will be answered using the quantitative data gathered from the survey. All the data that collected from the survey questionnaire will be process and interpret as point out in research methodology.

2.3 Research Model

The integration framework proposed in the research model (figure) representing the job demand, job control and job support as independent variables where it become the determinant factors for workplace's psychological stress. While the workplace psychological stress factors is the dependent variable in the setup. The occurrence of the incident of the job demand, job control and job support indicator at workplace will be studied.

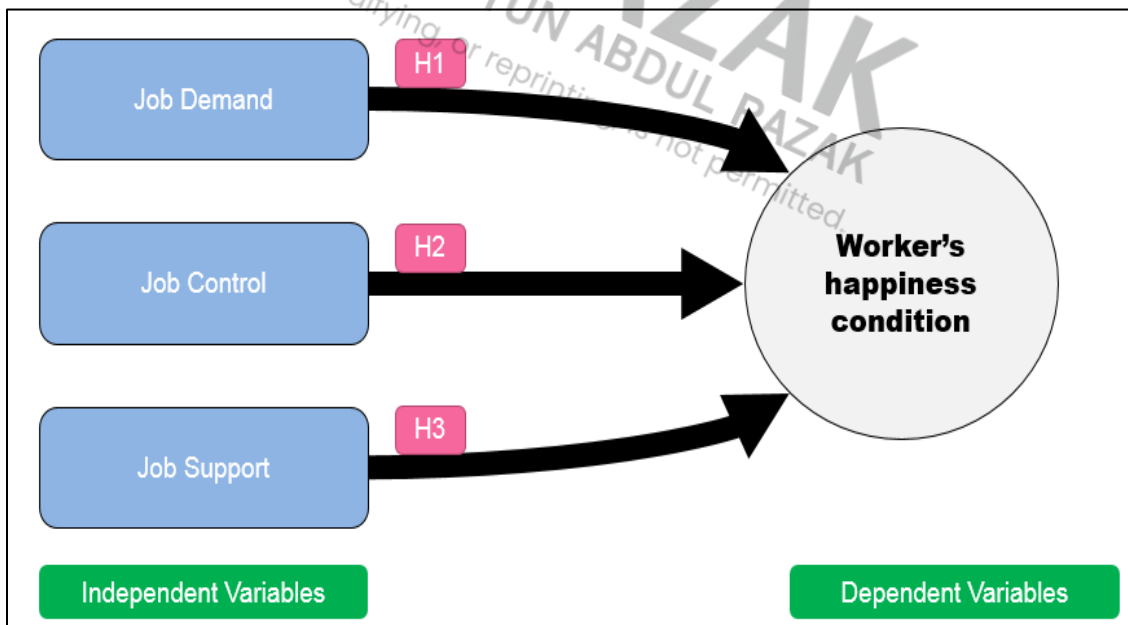


Figure 1: Proposed research framework.

2.4 Hypothesis Development

Job Demand were describe as the job requirement that employee need to perform according to their job role. It could be demanding for workload, physical strength or mental strength. While job control is the autonomy that employee have in their job. It cover the degree of decision making process that they have. Job control could encourage the employee creativity as the able to express and contribute their ideas accordingly. In other hand, job support is focusing into the organization system, co-worker and supervisor support that an employee get when it is needed. The required support will ease the burden from complicated task involving the employees. The JDSC theory has showed their important roles when defining the job satisfaction in most every type of jobs.

Work overload was observed as factor that able to influence the deterioration of occupational health. This was produced by acquiring on a large number of engagements, or small gap time towards dateline to complete a task. (Jose Joaquin Del Pozo-Antunez, Antonio Ariza-Montes, Francisco Fernandez-Navarro and Horacio Molina-Sanchez, 2018), if the prestige of one employee increases, the demand for their expertise will increase too. As consequence, it create the inconsistency in that excess demand on actual capacity which is the employee's work quality. There is also a case where an employee need to double up their effort to cover empty position left by others. As the employee was tied with their current responsibility, additional one person responsibility was added in their task bucket. This situation could increase the level of job demand and causing the employee to loss their resources such as time and energy. At the end of the day, is it could crack current level of depression, anxiety and stress condition for that individual. In contrast, when the employee was getting adequate demand which does not spoils too much energy from the resources; "the employee".

Based on the information gather, **H₁: There is positive relation between Job Demand and worker's happiness condition at workplace** was develop as one of the hypothesis.

Empirical evidence points to job autonomy and job support positively predict workers' mental health. (Vania S. Carvalho, Maria J. Chambel, Mariana Neto & Silvia Lopes, 2018) quote that autonomy refers to the ability to make decisions about work, the ability to be creative and to use and develop new skills, or professional development. A worker has autonomy when they have the opportunity to use skills and decision authority. Decision authority here brings the meaning for the individual's ability to make a decision on the work itself. The control that one has in their job creates the freedom feeling. (Daniel Wheatley, 2017) has examined changes in reported wellbeing relative to level of autonomy using 20,000 worker's data in two separate years. "Greater levels of control over work tasks and schedule have the potential to generate significant benefits for the employee, which was found to be evident in the levels of reported wellbeing." Generally, the higher levels of autonomy a worker experienced, the higher their sense of job satisfaction and mental wellness. Hypothesis#2 was derived; **H₂: There is negative relation between Job Control and worker's happiness condition at workplace.**

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H3 was construct to figure out the relevance of job-support level have to influence psychological stress at workplace. In the fast pace manufacturing environment, teamwork are crucial. A project tasks were too big in size as well as the risks. When teamwork coming into the frame, it was meant for job-support that one get from the others. (Siti Aisyah binti Panatik, 2010) There is four categories of support that could be distinguish: emotional support, appraisal support, instrumental support, and informational support. Emotional support can refers to a consciousness and understanding of the other person's situation, along with caring and empathizing with that person's worries. Appraisal support comprises the transmission of information that is relevant towards self-evaluation. In other words, appraisal support provides feedback on the other co-worker functioning that could enhance their self-esteem. Informational support entails giving information which may help fellow employees to deal with their problems, and instrumental support is providing various sorts of practical help to solve a problem. Job-support may directly reduce strain in the form of increasing employee self-esteem or self-worth. It also can reduce frustration feeling by the easy connection environment and avoid the feeling of rejection in the organization. Base on this, we perceived the next hypothesis (H3); **H₃: There is negative relation between Job Support and worker's happiness condition at workplace.**

For summary review, the developed hypothesis as below;

H₁: There is positive relation between Job Demand and worker's happiness condition at workplace.

H₂: There is negative relation between Job Control and worker's happiness condition at workplace.

H₃: There is negative relation between Job Support and worker's happiness condition at workplace.

2.5 Summary of Chapter 2

Several evidence from previous researchers was used to construct this research framework. The combination of Job-Demand-Control-Support theory was widely used previously to categorize factors that affecting stress in job function. To study the psychological stress at workplace, recognized key categories which is job demand, job control and job support were observed. The Job demand-control-support was adopted as the underpinning theory thought the present research. Hypothesis development also was identically construct according to the research objectives.



CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

In this chapter, implemented method or process in performing the research will be outline. The methodology will be the guidance for each activities that going to be performed when research is in progress. At this chapter, the discussion is starting with how the research was design, who are the subject for the study, and then the steps of how the population and data sample will be select and categorized. Followed by process that going to be used for collecting appropriate and relevance data for the research. In the other hand, variables and its measurement will be explained briefly. Lastly, the steps taken on how data going to be analyzed and translated into meaningful information will be included. The chapter will be summarized at the end of it.

3.1 Research Design

Research design is the whole plan for the study. (Durrheim, 2004) was describing research design as the strategic framework for action that serve as a bridge, connecting between the research questions and the execution of the research strategy. The present study investigates the effect of independent variables (job demand, job control and job support) on the dependent variable which is psychological stress at workplace. An electronic manufacturing in Ipoh was selected for the present research following the case study strategy. These study sampling approach will be following a *quantitative research* technique. It involved the usage of survey questionnaires in collecting data. In the record, there is researchers within the workers well-being topic using the quantitative strategy and survey method such as (R Zirwatul Aida, 2012). The research was performed within a specifically short timeframe.

The research design was constructed and conducted according to Cross-Sectional Study. Cross-sectional study method was chosen for its significance method when it comes to a study that performed in particular point of time over a variety of people, subjects or phenomenon. The study method giving the advantage on data that is dispersed subjects and large number of subjects. It has the ability to answer the research questions that looking for the exploration of to what is the effect of the independent variables towards dependent variable.

Job Demand-Control-Support level.

For this section, the well-being condition as well as the job demand, job control and job support experienced by respondent will be evaluated through questionnaire. The survey questions structure was adopted and modified from previous researcher (R Zirwatul, 2012). Initial survey will assess respondent experienced with job demand (7 questions), job control (9 questions) and job support (8 questions). However, not all the feedback will be used in the final analysis. Only significant questions will be extracted from the feedback for the main analysis purpose. Those questions will be run into Factor Analysis in SPSS to determine its relevance according to Cronbach's Alpha value. As adopted, the questions will need respondent to feedback according to scale 1 to 4 which 1: Strongly disagree; 2: Disagree; 3: Agree; and 4: Strongly agree. This scale was chosen in order to get quality response and to have specific answer rather than neutral which does not bring the value for the study. In contrast, (Sachdev & Verma, 2004) describe that five-point Likert scale would reduce respondent's frustration level, increase feedback rate as well as feedback quality. After getting the survey result, the stressor level will be quantified to describe and determine overall respondent condition in regards to those factors.

3.2 Study Population and Sampling Procedures

Sampling process was done according to the model from (Hamed Taherdoost, 2016) international journal of Academic Research in Management. In the journal, he put up 6 steps to be performed in sampling procedures. Below process diagram shows the flow.

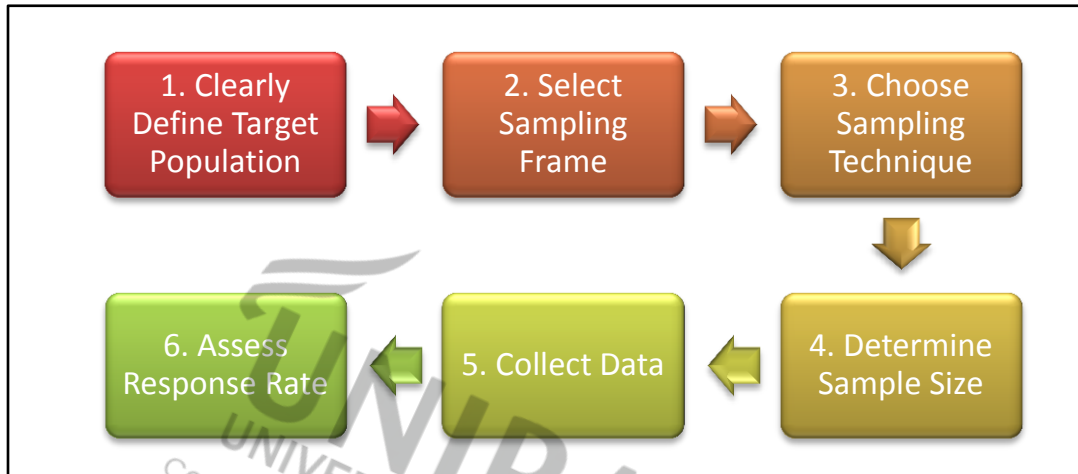


Figure 2: Sampling Process Steps

The target population for the study was taken from a manufacturing company in Perak, Malaysia. According to the (Jobstreet.com.my, 2021) website, the manufacturing was reported to have more than 2000 employees. After a casual interview with the company HR, it was known that around 1500 employees are working as manufacturing specialist and another 600 employees was at executive level. The executive group will be used as the target population that represent the organization for the study purpose. 600 population is the number of target population that research are looking into for the study.

The sampling frame will be full-time employee that working at executive level in the company. This is to ensure the selected sample was fully attached with organization policies, rules and regulation as well as experienced the similar organization culture. It is also to reduce the bias on the sample over their conflict of interest on selected organization. A contractual basis employee was not selected as they might have other

interest aside from the organization business activity. This is to reduce bias in data collected.

Simple random sampling technique was used in getting more diversification responds according to different employee job function. In this technique, every employee of the population has an equal chance of being selected as subject. (Gaganpreet Sharma, 2017) highlighted that the best thing about random sampling is the ease of assembling the sample. Further, it has the key feature as unbiased random selection and a representative sample are important in presenting conclusions from the results of a study. The main department availability in the organization have different roles, responsibilities and people engagement. In the company, there is several departments which is Human Resource, Production, Planning, Project Management, Supply Chain Management, Quality Assurance, Test maintenance, Test development, Logistic, Main Store, Information Technology, Safety and Security and Training department. 13 departments was recognized and will be used in the sampling data collection. Each department's size was studied and found that employee size range is within 15 to 35 employees at each departments. Based on that data, it is possible to get 15 to 23 respondents from each thirteen department. It is estimated that researcher could make up the total of targeted respondent equal to 247. There is assumption that different department will have different degree of job demand, support and control that reflect to research independent variables. It is to cater the diversity of data collection in order to have overall overview of entire organization.

Sample size was calculate based on the population size; 600 employee, 5% margin of error, 95% confidence level and 50% of response distribution. From above information, the minimum sample size required is 234. Table below shows how the sample size was determine. With the expectation to get 98% of response rate, survey questionnaire was decide to be distributed to 250 employees. Thus, expected complete respond to be received is 245 which is more than the required minimum sample size; 234. Data then will be collected from the respondent and response rate will be reassess.

Required Sample Size [†]								
Population Size	Confidence = 95%				Confidence = 99%			
	Margin of Error				Margin of Error			
	5.0%	3.5%	2.5%	1.0%	5.0%	3.5%	2.5%	1.0%
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	196	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
1,000	278	440	606	906	399	575	727	943
1,200	291	474	674	1067	427	636	827	1119
1,500	306	515	759	1297	460	712	959	1376
2,000	322	563	869	1655	498	808	1141	1785
2,500	333	597	952	1984	524	879	1288	2173

Table 1: Sample Size based on desire accuracy

3.3 Data Collection Method

Data for the study will be collect using survey questionnaire. The questionnaire was adopted from previous researchers (R Zirwatul Aida, 2012) whom using Job demand, job control, and job support as one of her research framework in predicting worker wellbeing. The questionnaire will be divided into 4 sections. First section will assessing respondent demographic. While in Section 2, the questionnaire will be assessing respondent incident with job demand characteristic. In section 3, respondent experienced over the job control characteristic will be asked. Lastly, job support that respondents had during their job execution will be weighed. Target respondent will be approach accordingly through distributed softcopy questionnaire.

The study will be conducted in ethical compliance. Targeted respondents were approached in a timely manner and will not disturb employee job activity. A brief explanation regarding the motive of the survey will be given. Then, verbal or written consent will be asked to individual respondents to use their feedback in a confidential manner. This is to avoid any conflict that might arise in the future. After getting the consent, the survey form will be provided through email or print-out copy according to the respondent's preference. Feedback that is received will be kept in an Excel file format for easy interpretation in the next research steps.

3.4 Operationalization and Measurement

Independent Variables

Job Demand (H1), Job Control (H2) and Job Support (H3) as the independent variables will be quantified using a five-stage agreeableness scale based on a designated questionnaire. The scale will range from 1 (strongly disagree) to 4 (strongly agree). These independent variables should be able to tell their level on every respondent's feedback.

On each independent variable, four constructive self-determination questions will be used as the medium to indicate respondents' job demand, control, and support that they received at the workplace. Then, the higher or lower the level they have will be determined according to the total score that they get according to the determined categories.

Dependent Variable

Employee well-being condition at workplace

As the nature of dependent variable, the outcome is dependent to the other variable in this research framework. Psychological condition will be assess through happiness condition of targeted respondents. Respondent will feedback their past 7days condition using the 3 scoring scale which is ‘unhappy’ (1), ‘normal’ (2) and ‘happy’ (3). Using the weight scale from those variables, the factors relation with worker psychological condition at workplace can be determine. Quantitative measurement will be used by plotting the distribution of each respondent feedback according to its classification. This will shows the prevalence of highlighted independent variables towards the dependent variable. Data correlation will be studied using Bivariate Correlation technique.

3.5 Data Analysis Techniques

Descriptive Analysis Techniques

The descriptive analysis used in the study will provide the description of the sample population framework for the data collection process. Information such as gender, age and working department will be include in the analysis technique. It is to enlighten the characteristic of the samples used for the research. In other hand, means, median, modes, and range of the data will also be covered in descriptive analysis. As the research progress, descriptive analysis was useful to organize the collected data for easy interpretation when performing the investigation. In instance, the research questions to know the percentage of employee that suffer from psychological stress can be figure out using the descriptive analysis. The occurrence of particular category can be distinguish in the form of statistical chart. Further, by adapting descriptive analysis, the investigation can eliminate any outlier’s data by setting the perimeter of study and making the research more focus to designated framework.

Inferential Analysis Techniques

This study also include inferential analysis to predict the pattern of job demand, control and support based on the department in the subject company. Although the analysis does not provide significant value to the research objectives, it could help researcher to overview the reliability of the collected data. For example, one person rated negatively for the job support he or she get, while everybody in the same particular department positively rated the job support that they get. This could give inference that one unique person is having some other issue that out of the study scope. Inferential analysis also been used to predict the whole organization workplace condition based on the descriptive analysis pattern.

3.6 Summary of Chapter 3

This chapter are focusing on the methodology that will be used during the research. Research design was well prepared to ensure the research does not carried away into broaden view. A questionnaire survey approach will be used as the medium for quantitative data collection. The designed survey was distribute to a targeted electronic manufacturing company located at Ipoh, Perak. The method of selecting the respondents was explained. Before the main data collection, a pilot study were performed using initial survey. Respective initial questionnaire then will be modified with the reference from Factor analysis. The survey questions then was adjusted by removing suggested questions according to the factor analysis input. The Cronbach's alpha produced from the factor analysis indicate the internal consistency of the instrument (R Zirwatul, 2012). Further, in this cross-sectional study, population and sample study is mention before discussing other processes phases. Sampling method that proposed is significant to the data reliability and motivate by the needs for specific answer instead of normalize response. Descriptive and inferential analytical skills was used in interpreting the end research outcome. The chapter was explain in an organized flow from the beginning of designing the research until the techniques of analyzing the data.

CHAPTER 4

MAIN ANALYSIS AND HYPOTHESIS TESTING

4.0 Introduction

In this chapter, the received respond from the distributed survey will be analyzed and discussed. IBM SPSS Statistic 26 and Microsoft Excel 2013 software was used to interpret the data collection into meaningful information. As early plan from the research design, total of 245 feedback were expected to be gained from the study. Therefore, 250 survey was distribute among employee of selected organization. It is easy for me to engage with the respondent as I'm working inside the organization. Bivariate analysis to find the Pearson Correlation value for each predictors with the employee recent happiness condition. From total distribute survey, 215 survey feedback was responded virtually via Google form. While, 20 respondents were engage individually to get their feedback for more data. Although the total input received was less than projected (98%), the survey feedback have a quite positive return rate which is 94%.

The questionnaire was adopted from previous researcher (R Zirwatul, 2012) which have the Job demand, job control and job support model as one of her research framework. The questionnaire was go through her pilot study for questions reliability checking. Cronbach value analysis was performed on current survey questions for its relevance. Pilot survey was conducted on 15 respondents and Cronbach's Alpha value was analyze to validate and modify survey questionnaires. Below are the Cronbach's Alpha value comparison from Karasek(1985), R Zirwatul(2012) and present research.

Cronbach's Alpha Value	Karasek (1985)	R Zirwatul (2012)	Present research
Job Demand	.51	.70	.80
Job Control	.68	.64	.81
Job Support	.84	.83	.88

Table 2: Initial survey Factor Analysis output.

4.1 Respondent background

As prepared in the early survey questionnaires, a brief respondent background profile will be collected. The demography is not the main focus in the research but rather than a control variable. It is to give researcher a clear picture of population that was studied. Total of 235 returned response has populate by 56.6% male and 43.4% female. Most of the respondent are from the age group 30 to 39 years old. Followed by 40 to 49 years old and 18 to 29 years old at 44.7% and 8.9% respectively. While 83% from those respondent were married and another 17% feedback indicate as single. Derived from the survey, respondents was asked to select their condition ranging from their past 7days and 91.1% of the respondents rating their condition as normal and only 1.7% of the feedback returned as happy condition. In other hand, 6.8% respondent was feeling unhappy for their past 7days (from the day they do the survey).

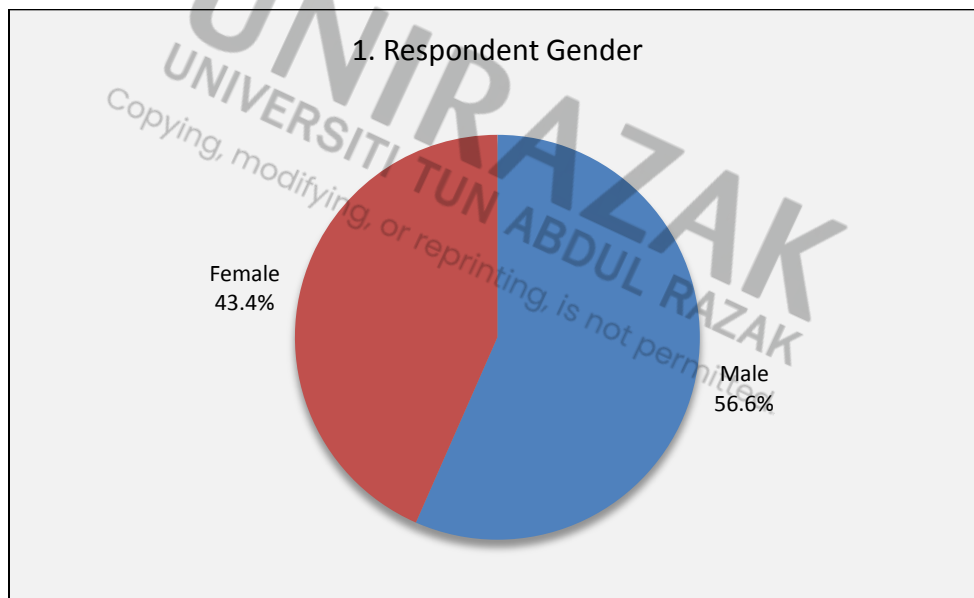


Figure 3: Respondent Gender percentage

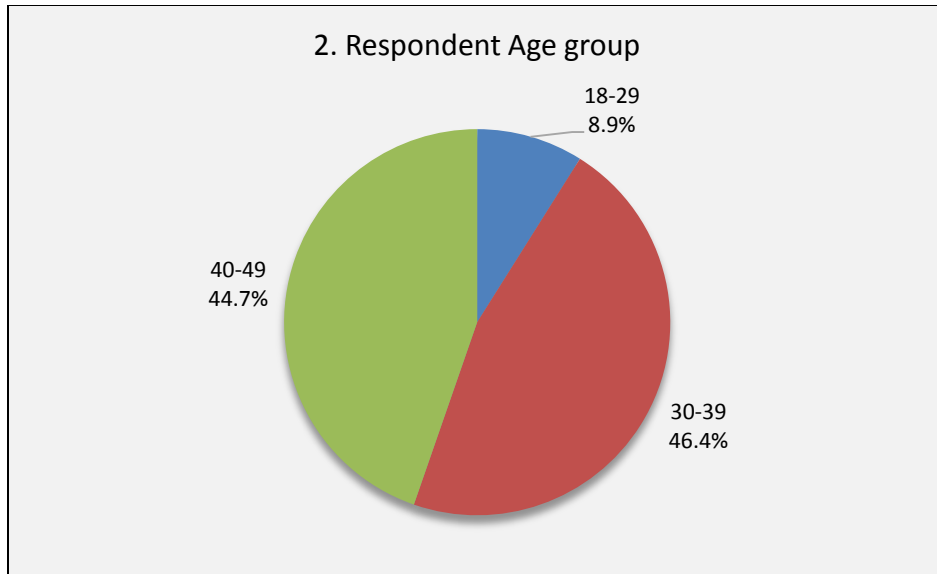


Figure 4: Respondent Age group

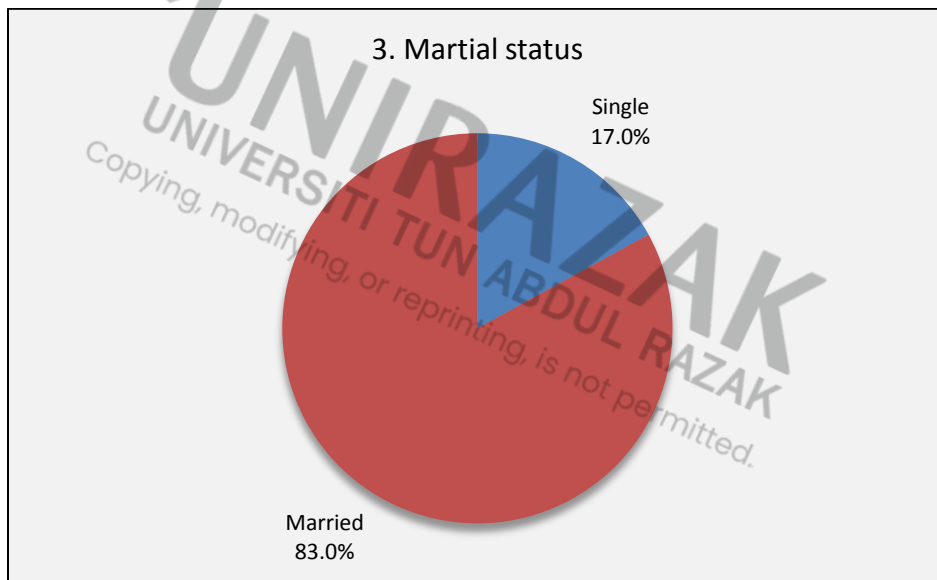


Figure 5: Respondent marital status.

4. Which condition is best describing your condition for the past 7days?

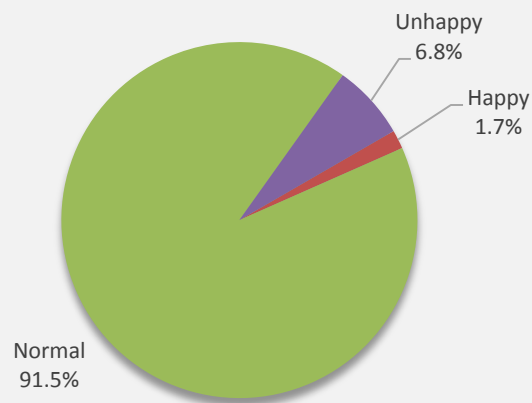


Figure 6: Respondent happiness.

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4.2 Job Demand descriptive analysis.

Both factors under job demand category show high prevalence as 79.1% are strongly agreed and 20.9% agreed that they have to work very hard. No respondent was disagreed or strongly disagreed with the statement. While 98.7% of the respondent agreed that they always found themselves in unrealistic dateline. The rest 1.3% respondent was disagreed.

This result have indicate that the needs of working very hard and unrealistic dateline are highly observed as serious incidents in the workplace.

My job requires working very hard.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	49	20.7	20.9	20.9
	Strongly Agree	186	78.5	79.1	100.0
	Total	235	99.2	100.0	
Missing	System	2	.8		
Total		237	100.0		

Table 3: Description analysis table for job demand1.

I always found myself in unrealistic datelines.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	1.3	1.3	1.3
	Agree	232	97.9	98.7	100.0
	Total	235	99.2	100.0	
Missing	System	2	.8		
Total		237	100.0		

Table 4: Description analysis table for job demand2.

4.3 Job Control descriptive analysis

Under the job control category, 44.7% and 53.6% respondents strongly agreed and agreed respectively that they have low control in making decision on their own regarding their task. 1.3% respondents disagree with the statement. Second question pertaining the freedom to decide how the respondents are going to do their work, data analysis found that 92.3% disagree that they have enough freedom and supported with another 1.3% strongly disagree respondents. The remaining 6.4% are agreed that they have the freedom to perform their job as their wanted.

My job allows me to make a lot of decisions on my own.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	.4	.4	.4
	Disagree	3	1.3	1.3	1.7
	Agree	126	53.2	53.6	55.3
	Strongly Agree	105	44.3	44.7	100.0
	Total	235	99.2	100.0	
Missing	System	2	.8		
Total		237	100.0		

Table 5: Description analysis table for job controll.

On my job, I have very little freedom to decide how I do my work.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.3	1.3	1.3
	Disagree	217	91.6	92.3	93.6
	Agree	15	6.3	6.4	100.0
	Total	235	99.2	100.0	
Missing	System	2	.8		
Total		237	100.0		

Table 6: Description analysis table for job control2.

4.4 Job Support descriptive analysis

The result from job support category also showing 85.5% respondents disagree that their supervisor are concern with their welfare. While 14.5% of the respondent do agree that their supervisor are concerned with their welfare. Aside, 77.4% of the respondents disagree that their supervisor is helpful when it comes to completing a job or task. However, 22.1% agreed their supervisor is doing the good job in helping them to finish their job.

My supervisor is concerned about the welfare of those under him/her.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	34	14.3	14.5	14.5
	Disagree	201	84.8	85.5	100.0
	Total	235	99.2	100.0	
Missing	System	2	.8		
Total		237	100.0		

Table 7: Description analysis table for job support1.

My supervisor is helpful in getting the job done.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	.4	.4	.4
	Disagree	182	76.8	77.4	77.9
	Agree	52	21.9	22.1	100.0
	Total	235	99.2	100.0	
Missing	System	2	.8		
Total		237	100.0		

Table 8: Description analysis table for job support2.

4.5 Correlation study and hypothesis testing.

The combining result was run in to correlation with the respondent past 7 days happiness condition. As according to (Merriam-Webster, 2012), happiness is the state of well-being and contentment. Suitable with the needs of the research objective which trying to study the psychological factors at workplace. Therefore, it is the right scale to correlate the findings in respondent's happiness feeling with the job demand, job control and job support factors. The correlation was to look into the effect from job demand, job control and job support that respondent have towards their well-being. Using the SPSS, Bivariate correlation was done on each job demand, control and support factors individually. The result has expose that job demand does have .078 correlation with happiness condition but at $p = .233$ it is not statistically significantly from zero. We could say that there is a 0.233 chance of finding it if the population correlation is zero. In regards of the Pearson Correlation value, we also found a weak positive correlation between happiness condition and job control factor, $r = .224$, $p = .001$. While for job support factor, we found a weak negative correlation between respondent happiness condition and job support factor, $r = -.202$, $p = .002$. Details statistical result as below table.

		Correlations			
		Happiness condition	jobdemand	jobcontrol	jobsupport
Happiness condition	Pearson Correlation	1	.078	.224**	-.202**
	Sig. (2-tailed)		.233	.001	.002
	N	235	235	235	235
jobdemand	Pearson Correlation	.078	1	.448**	-.110
	Sig. (2-tailed)	.233		.000	.091
	N	235	235	235	235
jobcontrol	Pearson Correlation	.224**	.448**	1	.071
	Sig. (2-tailed)	.001	.000		.281
	N	235	235	235	235
jobsupport	Pearson Correlation	-.202**	-.110	.071	1
	Sig. (2-tailed)	.002	.091	.281	
	N	235	235	235	235

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

Table 9: Pearson Correlation table for JDCS.

4.6 Hypothesis testing.

Using the Pearson Correlation value and statistical acceptance significant ($p < 0.05$), the independents variables were test. Their relation then were able to predict and conclude early research hypothesis. Summary of hypothesis result as below table.

Null Hypothesis	H ₀ : There is negative relation between Job Demand and worker's happiness condition at workplace.
Alternate Hypothesis	H ₁ : There is positive relation between Job Demand and worker's happiness condition at workplace.
Hypothesis test result	There is no correlation between Job Demand factor and worker's happiness condition. $r = 0.78$, $p = 0.233$.
Conclusion	There is not enough evidence to reject the null hypothesis.

Null Hypothesis	H ₀ : There is positive relation between Job Control and worker's happiness condition at workplace.
Alternate Hypothesis	H ₂ : There is negative relation between Job Control and worker's happiness condition at workplace.
Hypothesis test result	There is weak positive correlation between Job Control factor and worker's happiness condition, $r = 0.224$, $p = 0.001$.
Conclusion	There is not enough evidence to reject null hypothesis.

Null Hypothesis	H ₀ : There is positive relation between Job Support and worker's happiness condition at workplace.
Alternate Hypothesis	H ₃ : There is negative relation between Job Support and worker's happiness condition at workplace.
Hypothesis test result	There is weak negative correlation between Job Support factor and worker's happiness condition, $r = - 0.202$, $p = 0.002$.
Conclusion	Hypothesis accepted.

4.7 Summary of Chapter 4

This chapter presenting the result of Job Demand, Job Control and Job Support correlation as the psychological stress factor. The relation then used to answer research hypothesis. The result indicate that factors from job support category were strongly related with psychological stress factor. It have significant effect towards workers happiness condition. Type of analysis perform in SPSS and Excel were describe.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.0 Workers happiness condition and JDCS model

Based on the happiness condition feedback, 91.5% respondent selecting 'Normal' as their happiness condition from the scale of Unhappy(1), Normal(2) and Happy(3). Only 1.7% of the respondent describe their feeling as 'Happy'. While 6.8% indicate as 'Unhappy'. This statistic was somehow indicate more people is unhappy than happy. While this was happen to be in a workplace, there should be an appropriate action done to reduce the unhappy ratio. Further, 91.5% who could not describe their feeling between happy and unhappy could be regards from the individual traits factor which probably from low self-esteem, scared or shyness that one have in announcing their feeling.

The job demand, control and support factors was not a critical determinant factors to describe physiological stress factor in well-established electronic manufacturing executive workers. First, the job does not have very demanding in term of physical capacity and capability. Most of the executive workers does not required to use most of their physical strength in performing their daily task. For example, there is proper tools and systematic procedure when lifting heavy load. Further, most of executive workers have their acceptance degree of decision that they can make supporting with the organization approval system. As per research observation, although the person have high control in their job, they still exposed with the psychological stress.

5.1 Limitation of the study

The result and findings from the study has contradict from previous researchers. (R Zirwatul, 2012) has the result that can positively correlate Job demand-control-support model with employee well-being. However, in her research there is multiple predictors aside from Job demand-control-support model. Current study also was performed only in

one organization that could have the bias in the result as they have similar work environment. Therefore, the result from the study was not able to forecast in general regarding the independent variables goodness response. The study also was not a longitudinal study that involve repeated observations over the same sample. Hence, the research was performed as cross-sectional study in particular time frame in year 2021.

5.2 Recommendation for future study

It would be good to analyze the psychological stress affect from the individual traits. A cross-sectional study over individual traits could be interesting topics to be explored when trying to determine the psychological stress at workplace. Nowadays, most of organization was adapting healthy workplace policy. However, a person mental wellness were rising statistically. Job burnout, employee turnover, tardiness and no job satisfaction are most engaged issue among the organization management. In understanding particular employee traits, the work psychological stress could be reduced.

Type of work environment and work culture affect towards employee well-being were recommended to be explored as more organization are moving away from traditional work culture and environment. For example, the Google Inc. business culture and how they preparing their work environment with employee oriented approach. The effect of such style adaptation into Malaysian's business organization scenery.

5.3 Conclusion

There is positive findings on job support relationship with worker's happiness condition at workplace, ($r = -.202$, $p = .002$). Reflecting to the research questions; what is the relationship of job support with workers happiness condition? The result was able to conclude that job support have negative correlation with worker's happiness condition. This means that the more job support that a worker received in completing their job, the happier they will be. While, there is no statistical significant can conclude the relation of job demand and worker's happiness condition, ($r = .078$, $p = 0.233$). The findings can indicate that job demand in the manufacturing company does not significantly affecting worker's happiness condition. In other hand, there is surprise result in place of job control. Founded that there is positive correlation between job control and worker's happiness condition, ($r = .224$, $p = .001$). The condition was probably due to the adequate level of job control that observe from the respondent. Job control were able to reduce the affect from job demand factors. This is was the insight from (Jose Joaquin, Antonio Ariza-Montes, Francisco Fernandez and Horacio Molina, 2018) where Job Control and Job Support as mediating variables that could reduce the effect from job demand.

From the research result, it can highlight the importance of job support in order to increase worker's happiness condition in a manufacturing company. Among the 235 respondent, job demand factor was not able to affecting their happiness condition. Although, from the feedback there is considerable high level of job demand such as 98.7% respondent agree that they required to work fast and combination of agree and strongly agree at 99.6% respondent feedback they need to work hard. While, among the respondent they are in highly regards of agree or strongly agree that they have good job control over their activities at workplace.

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APPENDICES

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Appendix A – Initial survey questions.



Information page.

STUDIES ON WORKPLACE PSYCHOLOGY STRESS FACTORS IN A MANUFACTURING COMPANY.

Dear respondents,

My name is Mohd Shafrin, I am a master student at Graduate School of Business, Universiti Tun Abdul Razak. I'm currently undertaking a research project mentioned above. I shall be grateful if you could take part in this important study by completing this survey.

This questionnaire will require about 10 minutes of your time. Answers and information given will be treated with the highest confidentiality and will be used for the purpose of this research only. It is expected that the information and the insight gained from this research will contribute to the knowledge in workers wellness.

Thank you for your time and cooperation.

Best regards,

Mohd Shafrin

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Section A: Respondents' demographic background. Please mark [X] in the box relevant to you.

1. Gender Male
 Female

2. Age 18-29
 30-39
 40-49
 50+

3. Status Singled
 Married

4. Which condition is best describing your happiness for the past 7days?

Unhappy
 Normal
 Happy

Job Demand - Please checked the column that best describe your present agreement or disagreement with each statement.				
	Strongly Disagree	Disagree	Agree	Strongly Agree
5. My job requires working very fast.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. My job requires working very hard.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I am not asked to do an excessive amount of work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I always found myself in unrealistic datelines.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I am free from conflicting demands that others make.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I have proper tools or software to accomplish my task.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I was able to fulfill my daily task plan without frequent interruption.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Job Control - Please checked the column that best describe your present agreement or disagreement with each statement.				
	Strongly Disagree	Disagree	Agree	Strongly Agree
12. My job requires that I learn new thing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. My job involves a lot of repetitive work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. My job requires me to be creative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. My job requires a high level of skill.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. I get to do a variety of different things on my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. I have an opportunity to develop my own special abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. My job allows me to make a lot of decisions on my own.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. On my job, I have very little freedom to decide how I do my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. I have a lot of say about what happens on my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Job Support - Please checked the column that best describe your present agreement or disagreement with each statement.				
	Strongly Disagree	Disagree	Agree	Strongly Agree
21. My supervisor is concerned about the welfare of those under him/her.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. My supervisor pays attention to what I am saying.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. My supervisor is helpful in getting the job done.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. My supervisor is successful in getting people to work together.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. People I work with are competent in doing their jobs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. People I work with take a personal interest in me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. People I work with are friendly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. People I work with are helpful in getting the job done.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix B – SPSS analysis output

Total Variance Explained									
Compon ent	Initial Eigenvalues			Extraction Sums of Squared			Rotation Sums of Squared		
	Total	% of Variance	Cumulativ e %	Loadings			Loadings		
				Total	% of Variance	Cumulativ e %	Total	% of Variance	Cumulativ e %
1	2.074	29.633	29.633	2.074	29.633	29.633	1.992	28.464	28.464
2	1.570	22.433	52.066	1.570	22.433	52.066	1.545	22.071	50.535
3	1.270	18.150	70.216	1.270	18.150	70.216	1.378	19.681	70.216
4	.697	9.957	80.173						
5	.647	9.248	89.422						
6	.422	6.022	95.444						
7	.319	4.556	100.000						

Extraction Method: Principal Component Analysis.

Table 10: Initial factor analysis.

One-Sample Test						
Test Value = 2.5						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
5. My job requires working very fast.	29.678	234	.000	.968	.90	1.03
6. My job requires working very hard.	48.631	234	.000	1.291	1.24	1.34
7. I am not asked to do an excessive amount of work.	33.695	234	.000	.560	.53	.59
8. I always found myself in unrealistic datelines.	66.391	234	.000	.487	.47	.50
9. I am free from conflicting demands that others make.	67.166	234	.000	.496	.48	.51
10. I have proper tools or software to accomplish my task.	43.994	234	.000	.526	.50	.55

11. I was able to fulfill my daily task plan without frequent interruption.	84.680	234	.000	.509	.50	.52
12. My job requires that I learn new thing.	36.164	234	.000	.560	.53	.59
13. My job involves a lot of repetitive work.	1.637	234	.103	.053	-.01	.12
14. My job requires me to be creative.	36.164	234	.000	.560	.53	.59
15. My job requires a high level of skill.	31.333	234	.000	.577	.54	.61
16. I get to do a variety of different things on my job.	40.792	234	.000	.491	.47	.52
17. I have an opportunity to develop my own special abilities.	59.750	234	.000	.509	.49	.53
18. My job allows me to make a lot of decisions on my own.	26.044	234	.000	.926	.86	1.00
19. On my job, I have very little freedom to decide how I do my work.	-25.247	234	.000	-.449	-.48	-.41
20. I have a lot of say about what happens on my job.	82.908	234	.000	.500	.49	.51
21. My supervisor is concerned about the welfare of those under him/her.	-15.451	234	.000	-.355	-.40	-.31
22. My supervisor pays attention to what I am saying.	118.500	234	.000	.504	.50	.51
23. My supervisor is helpful in getting the job done.	-10.248	234	.000	-.283	-.34	-.23
24. My supervisor is successful in getting people to work together.	7.660	234	.000	.228	.17	.29

25. People I work with are competent in doing their jobs.	27.742	234	.000	.653	.61	.70
26. People I work with take a personal interest in me.	11.113	234	.000	.309	.25	.36
27. People I work with are friendly.	23.127	234	.000	.598	.55	.65
28. People I work with are helpful in getting the job done.	26.767	234	.000	.657	.61	.71

Table 11: One Sample T-test on every questions against targeted point 2.5.

Descriptive Statistics			
	Mean	Std. Deviation	N
Happiness condition	1.95	.288	235
jobdemand	3.3894	.22287	235
jobcontrol	3.1872	.34753	235
jobsupport	2.1809	.35545	235

Table 12: Descriptive analysis table.

		Correlations			
		Happiness condition	jobdemand	jobcontrol	jobsupport
Happiness condition	Pearson Correlation	1	.078	.224**	-.202**
	Sig. (1-tailed)		.117	.000	.001
	N	235	235	235	235
jobdemand	Pearson Correlation	.078	1	.448**	-.110*
	Sig. (1-tailed)	.117		.000	.046
	N	235	235	235	235
jobcontrol	Pearson Correlation	.224**	.448**	1	.071
	Sig. (1-tailed)	.000	.000		.140
	N	235	235	235	235
jobsupport	Pearson Correlation	-.202**	-.110*	.071	1
	Sig. (1-tailed)	.001	.046	.140	
	N	235	235	235	235

** . Correlation is significant at the 0.01 level (1-tailed).
* . Correlation is significant at the 0.05 level (1-tailed).

Table 13: 1-tailed Pearson Correlation analysis.

		Correlations			
		Happiness condition	jobdemand	jobcontrol	jobsupport
Happiness condition	Pearson Correlation	1	.078	.224**	-.202**
	Sig. (2-tailed)		.233	.001	.002
	N	235	235	235	235
jobdemand	Pearson Correlation	.078	1	.448**	-.110
	Sig. (2-tailed)	.233		.000	.091
	N	235	235	235	235
jobcontrol	Pearson Correlation	.224**	.448**	1	.071
	Sig. (2-tailed)	.001	.000		.281
	N	235	235	235	235
jobsupport	Pearson Correlation	-.202**	-.110	.071	1
	Sig. (2-tailed)	.002	.091	.281	
	N	235	235	235	235

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

Table 14: 2-tailed Pearson Correlation analysis

Appendix C – Pie chart for questions descriptive analysis

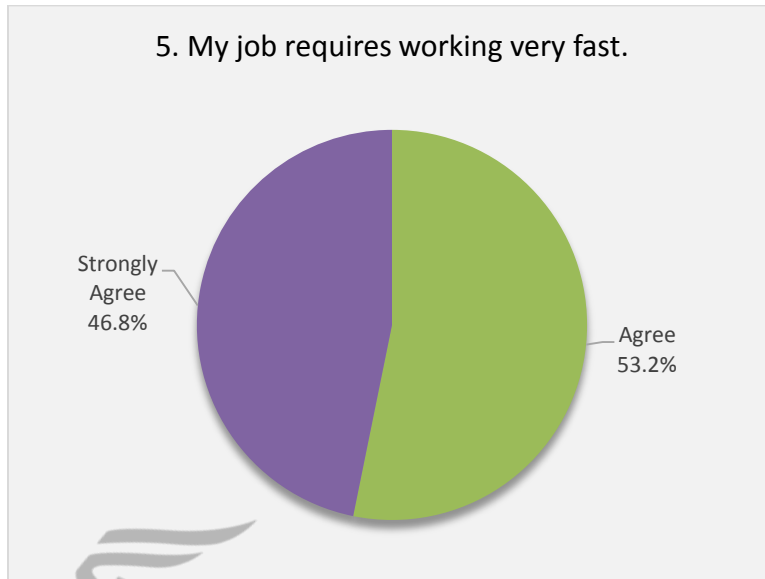


Figure 7: pie chart for Q5

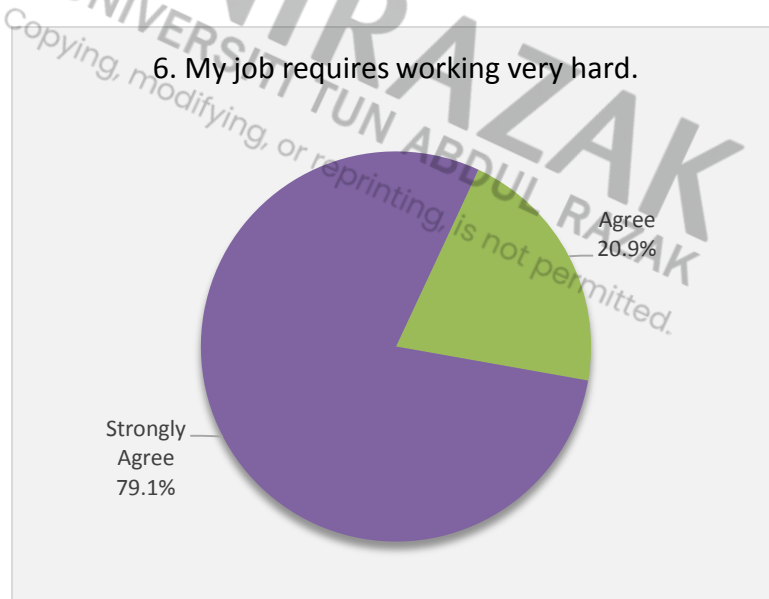


Figure 8: pie chart for Q6

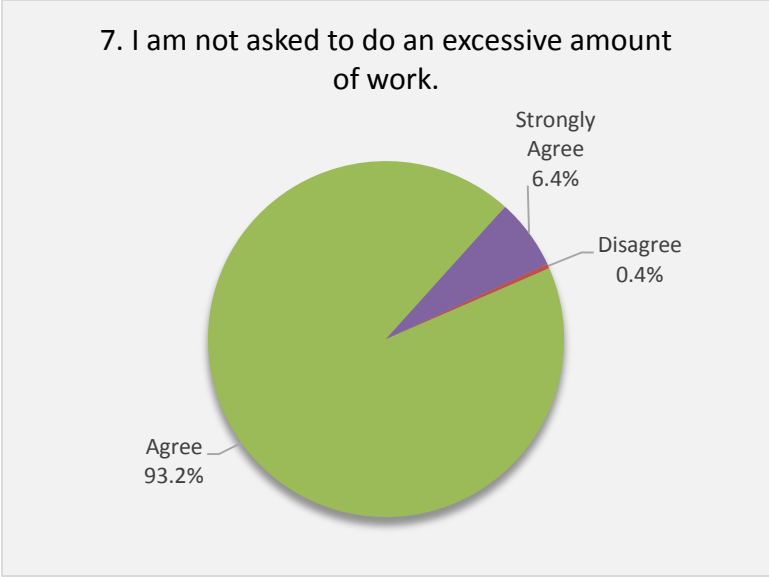


Figure 8: pie chart for Q7

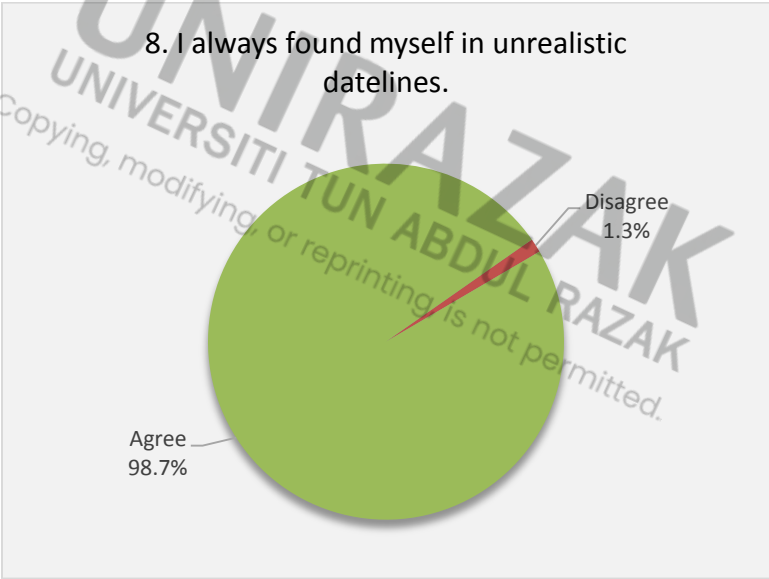


Figure 9: pie chart for Q8

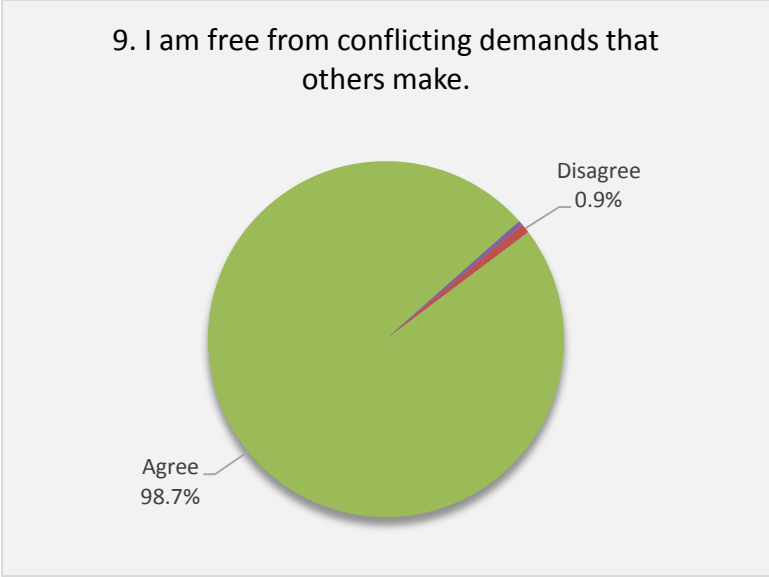


Figure 10: pie chart for Q9

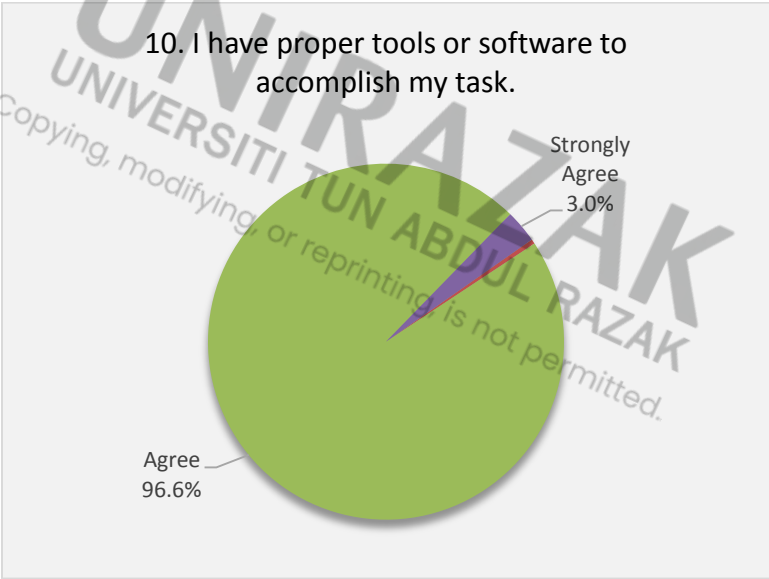


Figure 11: pie chart for Q10



Figure 12: pie chart for Q11

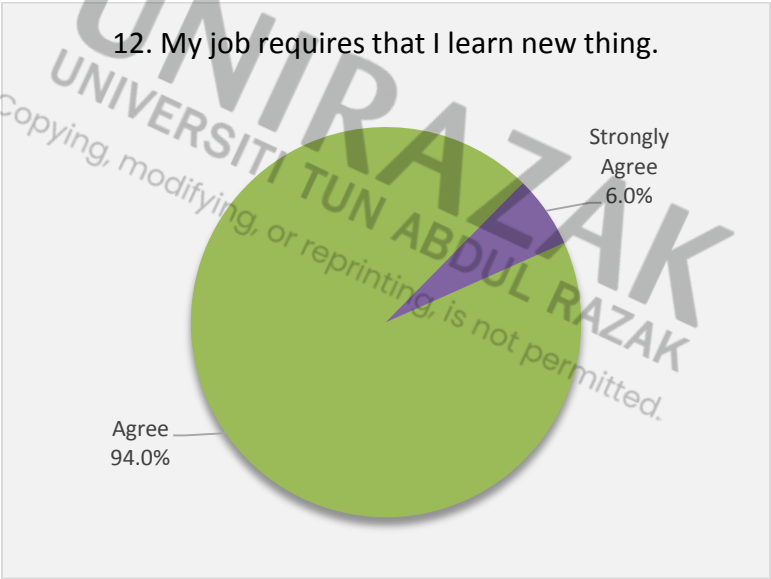


Figure 13: pie chart for Q12

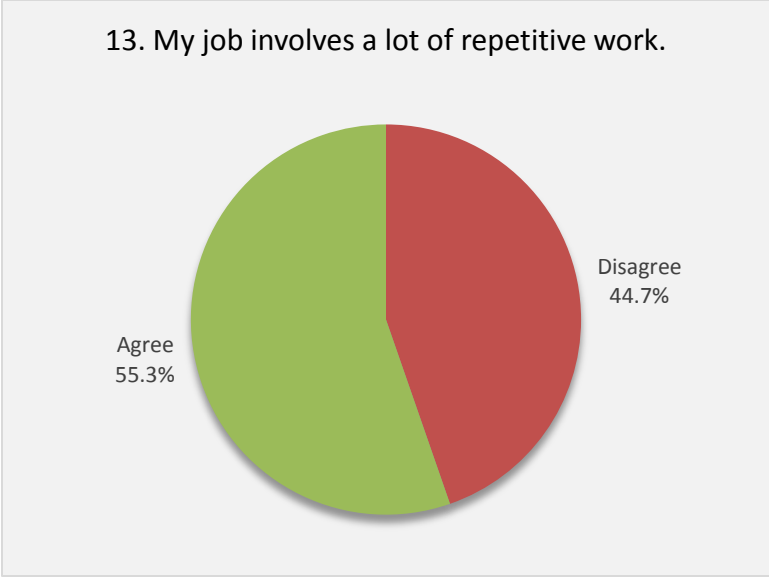


Figure 14: pie chart for Q13

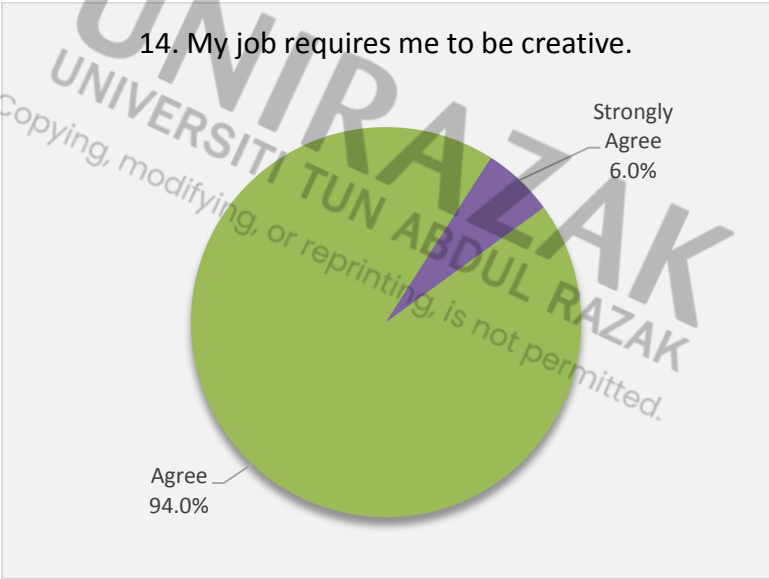


Figure 15: pie chart for Q14

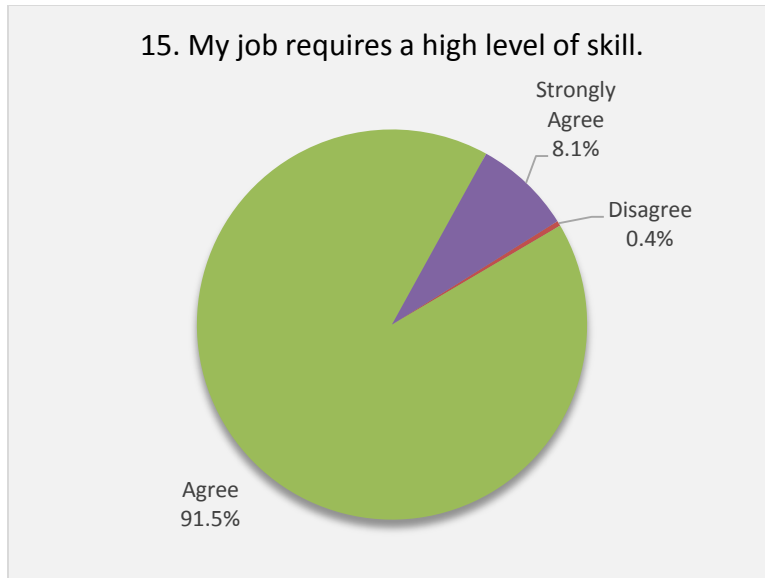


Figure 16: pie chart for Q15

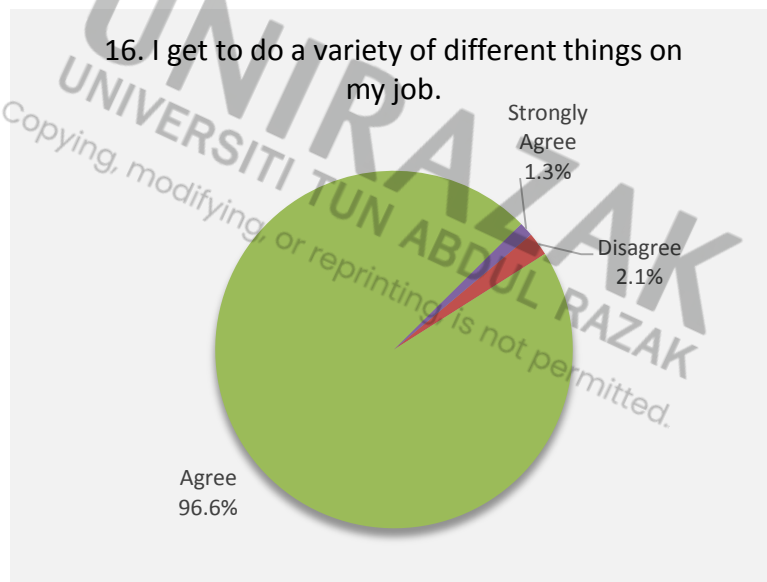


Figure 17: pie chart for Q16

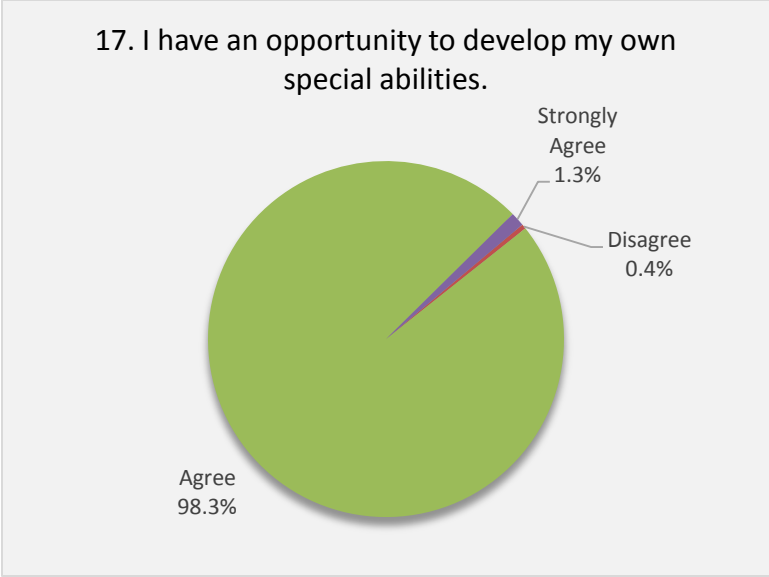


Figure 18: pie chart for Q17

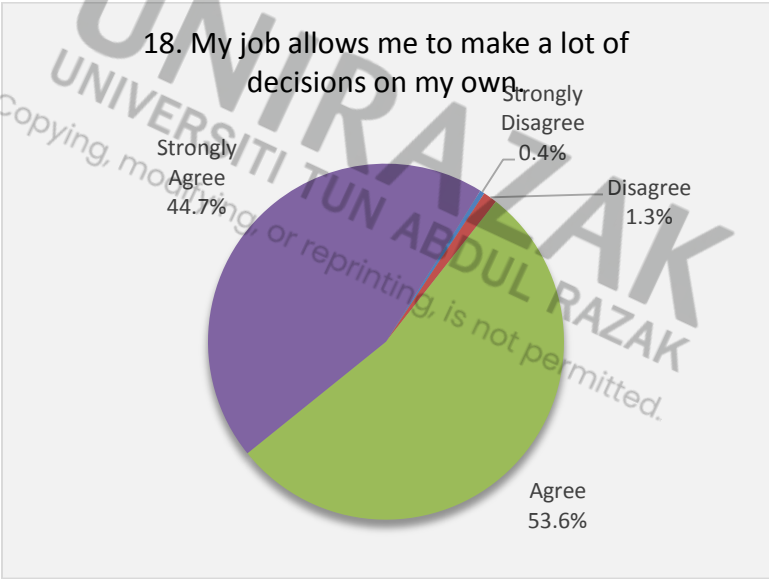


Figure 19: pie chart for Q18

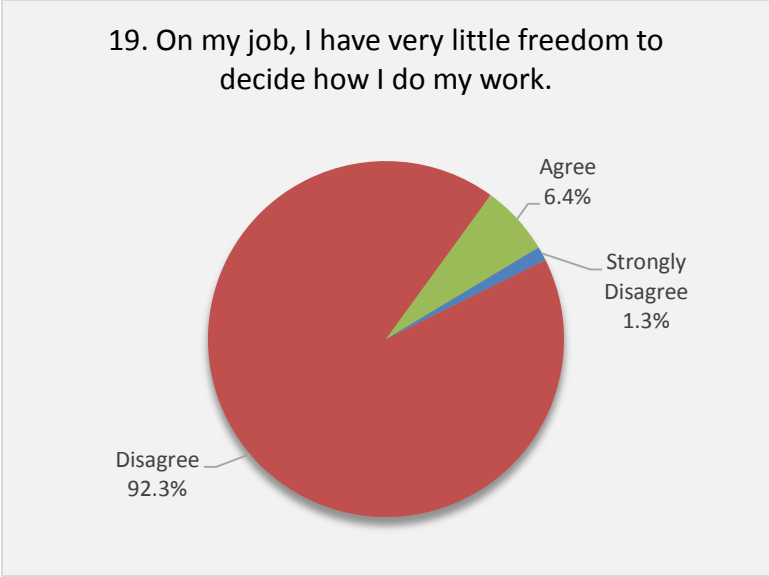


Figure 20: pie chart for Q19

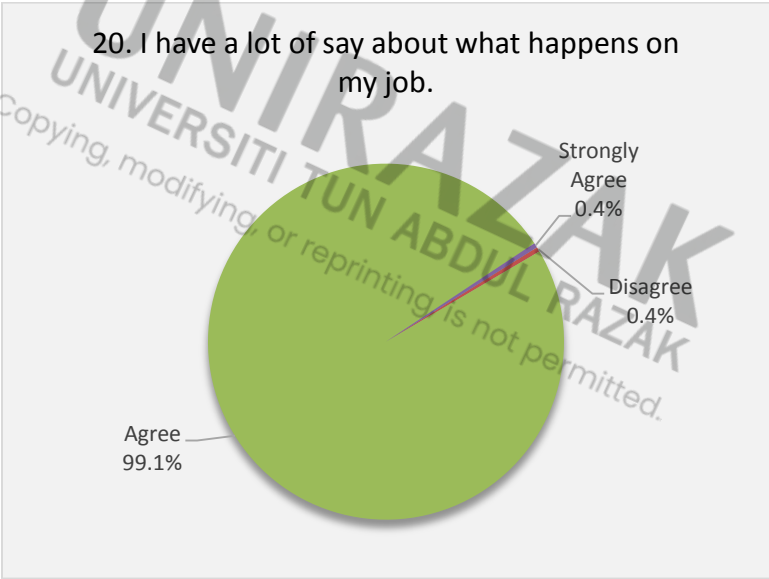


Figure 21: pie chart for Q20

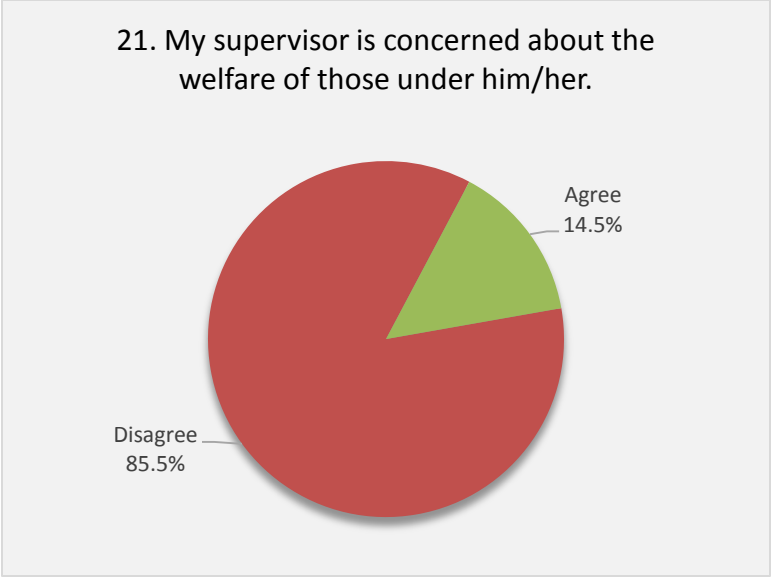


Figure 22: pie chart for Q21

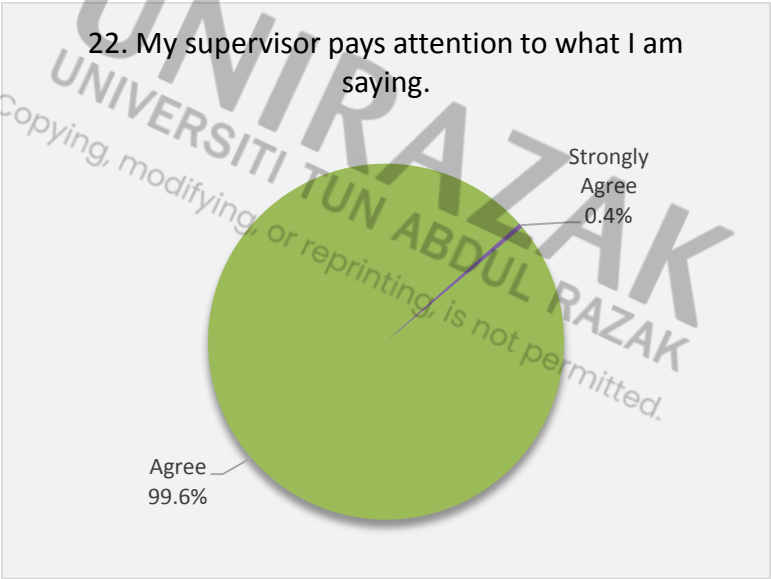


Figure 23: pie chart for Q22

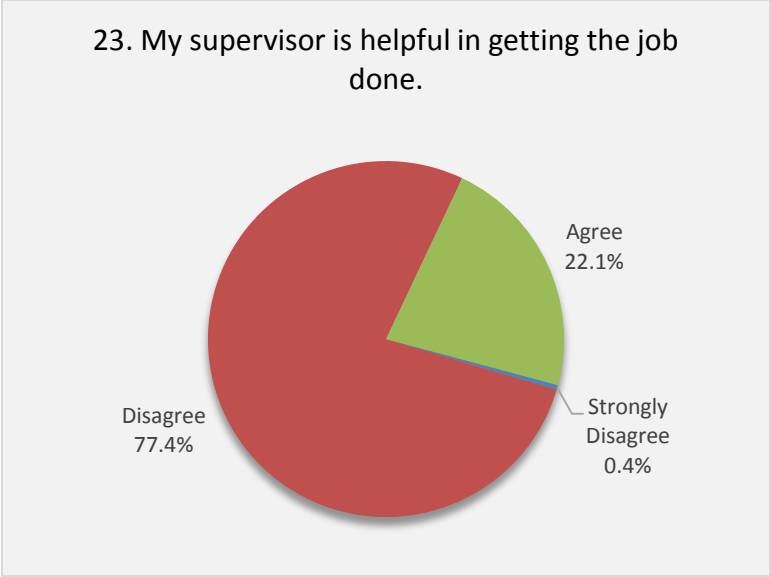


Figure 24: pie chart for Q23

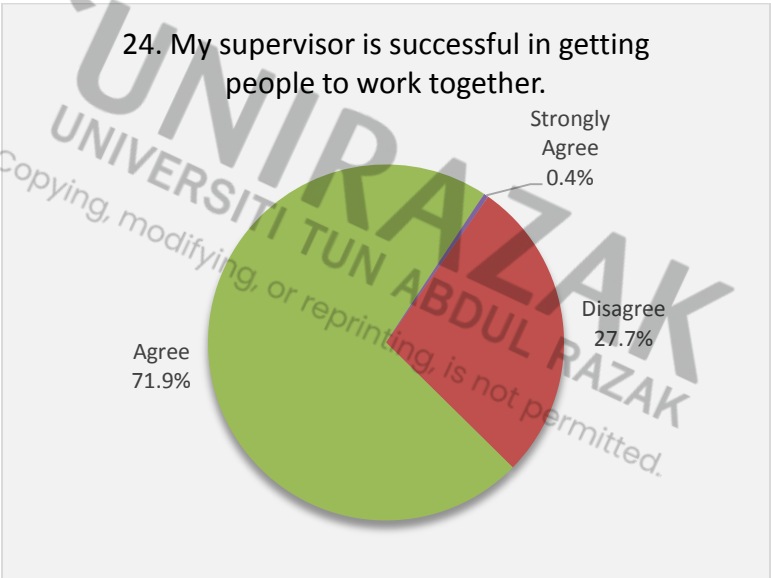


Figure 25: pie chart for Q24

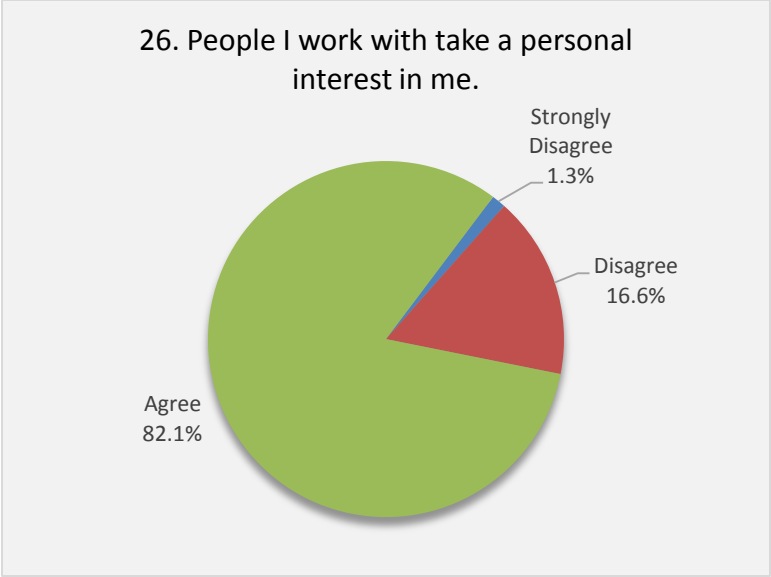


Figure 27: pie chart for Q26

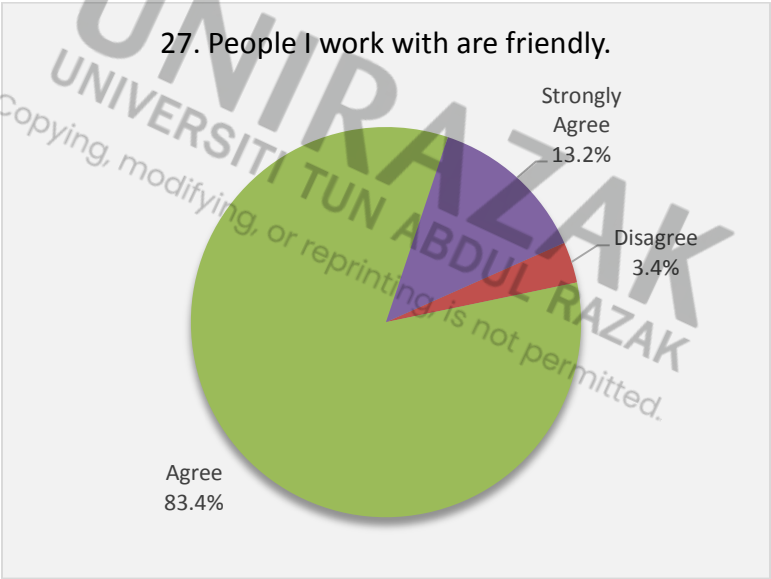


Figure 28: pie chart for Q27

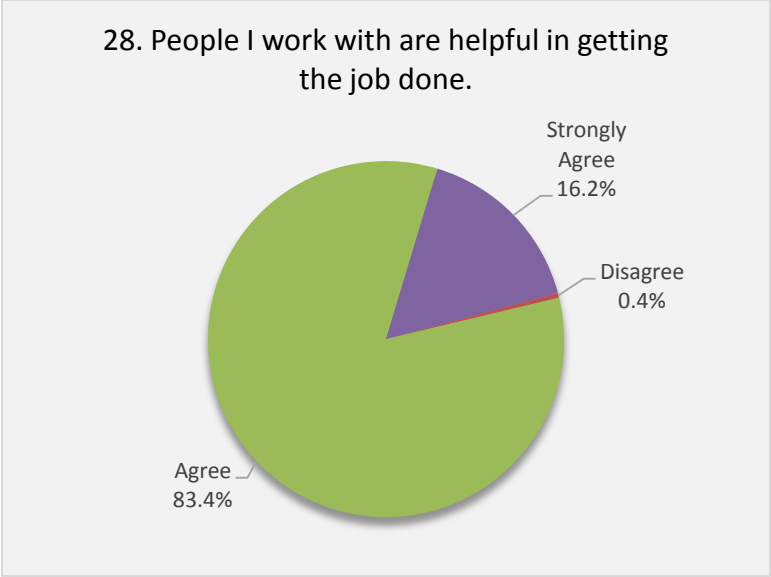


Figure 29: pie chart for Q28

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APPROVAL PAGE

**TITLE OF PROJECT PAPER: JOB DEMAND -CONTROL-SUPPORT
MODEL RELATIONSHIP WITH WORKER’S
HAPPINESS IN A MANUFACTURING
COMPANY**

NAME OF AUTHOR: MOHD SHAFRIN BIN MUHAMAD RAZALI

The undersigned certify that the above candidate has fulfilled the condition of the project paper prepared in partial fulfillment for the degree of Master of Business Administration.

SUPERVISOR

Signature

Name :

Date :



ENDORSED BY:

Dean

Graduate School of Business

Date: