WORK AUTONOMY AND COWORKER SUPPORT ON WORKPLACE CREATIVITY

UTAR

UNIVERSITI TUNKU ABDUL RAHMAN

THE RELATIONSHIP BETWEEN WORKPLACE AUTONOMY AND THE COWORKER HELPING AND SUPPORT ON THE WORKPLACE CREATIVITY AMONG UNDERGRADUATE INTERNS IN MALAYSIA

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The Relationship between Workplace Autonomy and the Coworker Helping and Support on the Workplace Creativity among undergraduate interns in Malaysia

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Dickson Cheong

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**Abstract**

Workplace creativity is a key element that determine an organization to be successful in today's era. However, it is unclear that the correlation between workplace autonomy and coworker support on workplace creativity. Therefore, this study utilized quantitative and cross-sectional design to examine the relationship between workplace autonomy and coworker support on workplace creativity among Malaysian undergraduate interns. There was a total of 85 respondents were recruited using purposive sampling by distributing the online survey through Facebook, WhatsApp, and Microsoft Teams. The participants recruited were mainly UTAR undergraduates who have completed their internship program. The result reported a significant positive correlation between workplace autonomy and coworker support on workplace creativity among Malaysian undergraduate interns through Pearson Correlation Coefficient. Besides, workplace autonomy and coworker support were found to significantly predict workplace creativity by performing multiple regression analysis. For future study, longitudinal study method is suggested to determine the causal-effect relationship between workplace autonomy, coworker support, and workplace creativity.

*Keywords:* Workplace Autonomy, Coworker Support, Workplace Creativity, Interns

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APPROVAL FORM

This research paper attached here to, entitled "The Relationship between Workplace Autonomy and the Coworker Helping and Support on the Workplace Creativity among undergraduate interns in Malaysia" prepared and submitted by Dickson Cheong, Goh Zhao Han, and Lim Qing Kang in partial fulfilment of the requirements for the Bachelor of Social Science (Hons) Psychology is hereby accepted.

Date:   28 November 2022

_____

Supervisor

(Ms Sanggari a/p Krishnan)

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Declaration

We hereby declare that the report entitled "The Relationship between Workplace Autonomy and the Coworker Helping and Support on the Workplace Creativity among undergraduate interns in Malaysia" submitted is written by us and is our own effort and no part has been plagiarized without citations.

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## List of Abbreviations

| | |
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| CS | Coworker Support |
| DOSM | Department of Statistics Malaysia |
| GDPs | Gross Domestic Products |
| IBM | International Business Machines Corporation |
| KS Test | Kolmogorov-Smirnov Test |
| SPSS | Statistical Package for Social Science |
| SW Test | Shapiro-Wilk Test |
| UTAR | Universiti Tunku Abdul Rahman |
| VIF | Variance Inflation Factor |
| WA | Workplace Autonomy |
| WC | Workplace Creativity |
| WFH | Work-From-Home |

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## Chapter I

## Introduction

**Background of Study**

Workplace Creativity has been an essential factor in determining organizational competence and success, throughout the production process of novel and useful ideas (Amabile, 1996, as cited in, Helzer & Kim, 2019). The importance of creativity has been sharply increased alongside the rapid developments in technology and global competition, which forces the industry to innovate (Chen and Kaufmann 2008; Zhou and Hoever 2014, as cited in Helzer & Kim, 2019). It is nearly endemic of the COVID-19 in the year 2022, however, things changed and shifted a lot in the past three years, especially in the workplace. One of the significant changes is virtual alternatives in replacing the physical ones, virtual or remote work is one of them in the list. During the pandemic, where social distancing has become a major health concern policy, people were encouraged to shift from traditional working hours in the office to WFH (Work-From-Home). Workplace creativity has reached another level of demand in maintaining an organization's competence.

Autonomy has been in a debate which it is highly related to creativity (Yoo et al., 2018). Autonomy was defined as the 'the degree to which the job provides substantial freedom, independence, and discretion to the employee scheduling the work and in determining the procedures to be used in carrying it out' (Hackman & Oldham, 1975). As a result to optimize employees' creativity, past research from India shows that the perceived workplace autonomy moderates the relationship between employee engagement and creativity (Pattnaik & Sahoo, 2020). However, another study reported that the autonomy and practice opportunities in the workplace are usually given too much or insufficient, which perceived tensions by employees (Olmos-vega et al., 2022).  On the other hand, coworker

support has become a critical factor creating a creativity-fit environment where employees are expected to share ideas (Hon et al., 2014; Koseoglu et al., 2020), which was supported by another research that sufficient coworker support and authorities are required for creative and consistent job performance (Appu & Kumar Sia, 2015).

Internship, or Industrial Training Program, is commonly considered as one of the most important things for university and college students, which offer opportunities for students or fresh graduates to apply their knowledge taught from the classrooms in the professional field settings related to their area of study (Anderson et al., 2002; Lei & Yin, 2019). It is mandatory for undergraduate students from the majority of the courses to get a passing grade in their internship program in order to graduate from their course (Silva et al., 2018; Hora et al., 2020). By mentioning the characteristics and importance of internship, it seems similar compared to a regular employment, although it is common with certain retention rate for a company and organization to hire fresh graduate interns as employees, as the main goal of internship program is to equip students with future career readiness in their respective fields (Maertz et al., 2014; Hora et al., 2020). Unlike regular employees, Internship programs consist of full- or part-time options, in return of respective hours of course credits and/or monetary incentives, within a specified duration of work at certain deadlines (Anderson et al., 2002; Lei & Yin, 2019). Students may check out whether their interested company or organization are opening positions for internship recruitments similar to how it works for regular employment. On the other hand, higher education institutions are also prioritizing to increase and enlarge their partnerships with firms and companies in order to provide the best internship opportunities and experience they could get for the students due to the growing education and market demands (Mario et al., 2019).

It seems relevant when the comparison has been made between the interns and the regular employees. However, the results are the one who speaks the truth, same goes to job

performance in the workplace. Past studies show that there are some bridging gaps of expectations between the three main internship stakeholders: employers, academic supervisors and students (UrquíaGrande et al., 2020). While, students were expected by the employers to have more creativity and cognitive skills (Urquía-Grande et al., 2020). Considering that creativity was mentioned for its importance in the workplace, it is essential to determine how creativity is stimulated in the workplace. Past studies reflected both positive and negative satisfaction on virtual internships experiences from supervisors and students, however they agree in common that the soft skills, technical skills, communication, opportunities to share information, knowledge and experiences were likely increasing due to remote working method (Jeske & Linehan, 2020; Teng et al., 2022).

Due to the shift of the workplace environment, that flexibility and adaptability become a demand for both workplace and interns, workplace autonomy and coworker support has become essential in building a foundation for workplace creativity to enable creativity performance of the interns.

**Problem Statement**

"Historically, internships played a vital role in education." (Herring et al., 1990, as cited in Lei & Yin, 2019). Internship program has been so important that it is considered as one mandatory credit in most of the tertiary education programs. There is not much past studies found regarding the performance of interns in Malaysian context. Considering the current internship offers, there are both paid and unpaid offers in exchange for the internship experience. There exists an unclear comparison between the unpaid and paid interns in terms of efforts put into work, work behavior, and work attitudes despite the experience is unique to each individual (Rogers et. al., 2021). This situation is a contradiction as the society is eager to agree that internships are important for undergraduate or fresh graduates to prepare

themselves for the future career, however, neither any actions were taken to enhance the case. From the employers' perspective, interns were expected to do well in creativity and cognitive skills, or namely the transversal skills (Urquía-Grande et al., 2020).

Creativity is one of the most important impetuses in deciding the success of creative companies. (Du et. al., 2021). Taking the creative industry in Malaysia as an example, the Gross Domestic Products (GDPs) for the creative industry in Malaysia had been stagnant from the year 2015 until 2019 at a low 1.5% (Department of Statistics Malaysia, 2020). The employment rate of the creative industries had also reduced from 6.0% in the year 2015 to 5.7% in the year 2019. This is in accord with the conclusion from a previous study published by Tan, Balaya & Goh (2022), whereby the main challenge faced by creative industries in Malaysia is the lack of creative talents. The lack of creative talents in Malaysia caused the reducing employment rate in the creative industries of Malaysia.

According to the Department of Statistics Malaysia (DOSM), a survey published in the year 2022 had shown an increasing unemployment rate since the year 2019. From 2019 Quadrant 1, with a low 3.3% of unemployment rate, Malaysia had risen to its highest rate of 5.1% in the year 2020 Quadrant 2 before reducing to 4.3% unemployment rate at the end of the year 2021 (Department of Statistics Malaysia, 2022). There is an evident increase in the unemployment rate since pre-pandemic. The decreasing rate of employment signifies that graduates in Malaysia are lacking and do not fulfill the basic requirements of employment in terms of soft skills development. In accordance with this, a statistic published by Department of Statistics Malaysia (DOSM) had shown an increasing skill-related underemployment rate in Malaysia. The year 2019 started with a low 32.9% and reached its peak in the year 2020 with a high 37.9% of underemployment rate before reaching 37.5% of underemployment rate by the end of the year 2021 (Department of Statistics Malaysia, 2022). According to Seetha (2014), employers acknowledged the lack of ability within fresh graduates of Malaysia to

think or analyze critically and creatively to generate solutions. There had been an emphasis on the importance of workplace creativity within an organization with the establishment of critical thinking and analytic training programs online. Other than that, Kim and Rou (2018) had stated that Asian societies shared the collectivistic culture within organizations. Furthermore, the collective culture within an organization contributes towards molding coworkers' relationships which ultimately generates similar responses or the lack of creativity towards solving issues (Kim & Rou, 2018).

**Significance of Study**

Companies that face having internships who are not able or willing to perform well caused by workplace creativity does not only affect the intern's effort and experience in applying their academic skills and knowledge into the workplace. It also affects the company or organization's profitability and performance the same as the underperforming employees do. However, studies regarding the intern's performance in the workplace are still under examination as well as the importance of the issue is underrated. This study would be beneficial to the companies and organizations' awareness in raising awareness on improving workplace creativity, which is essential for interns' performance, which enhances the organization's performance as well.

Furthermore, companies or organizations may have the possibility of not being aware enough of the importance of internship performances. Interns are considered as short-term, temporary, with lower salary, and working on basic level of tasks, and even not considered as "employees" under the labor act. However, interns are one of the main sources of occupying the workforce for tomorrow. Therefore, this study is highly beneficial for the interns themselves, as they will be able to identify the factors that affect their performance in the

workplace, which may be underestimated by their supervisors and working environment, at the same time, allow them to make improvements in their situation.

In contrast, there has been a lack of past studies regarding the internship programs as well as interns. Many focus on regular employees, however, the number of interns are increasing sharply in the industry along with the rise of educational importance. This research will provide a better insight in depth, to understand how workplace creativity could be formed along with workplace autonomy and coworker support and provide a better foundation for researchers who are interested in the relevant topics.

In conclusion, based on the statistical data we collected, we hope our findings may raise the awareness among undergraduate students and companies. The results will be beneficial to human resource managements, consultants, and interns themselves in order to implement helpful strategies and changes to the current workplace environment. We hope our study could contribute to future relevant research regarding this topic.

**Research Objective**

The main objective of this study is to investigate the relationship between workplace autonomy, coworker support, and workplace creativity among undergraduate interns in Malaysia. Our current study will focus on the significant correlation between workplace autonomy and workplace creativity, at the same time, between coworker support and workplace creativity among undergraduate interns in Malaysia.

**Research Questions**

1. Is there any significant relationship between workplace autonomy and workplace creativity among undergraduate interns in Malaysia?

2.  Is there any significant relationship between coworker support and workplace creativity among undergraduate interns in Malaysia?

3.  Will workplace autonomy and coworker support predict workplace creativity among undergraduate interns in Malaysia?

**Hypotheses**

$H_0 1$: There is no significant relationship between workplace autonomy and workplace creativity among undergraduate interns in Malaysia.

$H_1 1$: There is a significant relationship between workplace autonomy and workplace creativity among undergraduate interns in Malaysia.

$H_0 2$: There is no significant relationship between coworker support and workplace creativity among undergraduate interns in Malaysia

$H_1 2$: There is a significant relationship between coworker support and workplace creativity among undergraduate interns in Malaysia.

$H_0 3$: Workplace autonomy and coworker support will not predict workplace creativity among undergraduate interns in Malaysia.

$H_1 1$: Workplace autonomy and coworker support will predict workplace creativity among undergraduate interns in Malaysia.

**Conceptual Definitions**

*Workplace creativity.* Workplace creativity is the environment which stimulates creativity in work and operation within employees. According to Zhou & Hoever (2014), workplace creativity is an essential motivation for organizational innovation and victory demonstrated by groups and individuals in the organization. Creativity could be seen as the

product of novelty and usefulness, in terms of fluency and flexibility, which is the number of ideas generated or in different categories (Zhou & Shalley, 2011, as cited in Zhou & Hoever, 2014), or originality of ideas (Shalley & Zhou, 2008).

*Workplace autonomy.* Workplace autonomy is the level of autonomy and authority one employee was given by the organization or supervisor over their work. According to Breaugh (1985), workplace autonomy is formed by criteria that determine the degree of choice regarding the procedures to execute on one individual's work, the extent an employee feels they have controlled their work activity schedules, and the degree of choosing the criteria of their performance appraisal.

*Coworker support.* Coworker support is the level of support given by members of the organization in the workplace. According to Tews et al. (2013),  coworker support is distinguished into instrumental and emotional support, which stands for task-focused and person-focused support respectively.

**Operational Definitions**

*Workplace creativity.* Workplace creativity is measured by the Creativity at Workplace Organization Scale, a 20-item Likert scale. A higher score shows a higher level of workplace creativity characteristics (Musek, 2020). Related instruments of workplace creativity were measured using the 13-item creativity scale (Zhou & George, 2001), measuring the creativity and innovation behavior of employees in the workplace.

*Workplace autonomy.* Workplace autonomy is measured by the Work Autonomy Scale, a nine-item Likert scale with three subscales which are method autonomy, scheduling autonomy, and criteria autonomy. The higher scores indicate the higher level of autonomy (Breaugh, 1999). One related instrument for workplace autonomy is the Factual Autonomy Scale (Spector & Fox, 2003), consisting of 10 items, the higher scores representing a higher

level of autonomy. Another measurement is the Job Diagnostic Survey (Hackman & Oldham, 1975), which measures several characteristics of jobs, including workplace autonomy.

**_Coworker support._** Coworker support is measured by the Coworker Support Scale, a 14-item scale with two subscales which are instrumental support and emotional support. The higher scores demonstrate a higher level of coworker support (Tews et al., 2013). Related measurement for coworker support by (O'Driscoll et al., 2004), which consists of five items, ranging from "Strongly Disagree" to "Strongly Agree" (O'Driscoll et al., 2004, as cited in, Hoang, 2014).

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## Chapter II

## Literature Review

In the present day, organizations need creative talents to adjust to the ever-changing market trends as well as to conform to the changes within the industries. Çekmecelioğlu & Günsel (2011) stated that provision of the same services as well as products over a long period do not satisfy the market and will not last long enough for the organization to survive in the mature phase of industry cycle. In accordance with that, Sarkar & Chakrabarti (2015) mentioned that job opportunities come with requirements to a certain level of creativity as both individual and group creativity is significant for organizations performance. Furthermore, the same author had also mentioned that extrinsic factors such as environmental and social factors contribute towards creativity. Paramitha & Indarti (2014) classify the factors which contribute to creativity into personal and contextual factors. The presence of coworker support generates intrinsic motivation which leads to an increased interaction between the employees. High volume of interaction between employees ensures the exchanges of information as well as relay of knowledge which is significant towards enhancing creativity.

## Workplace Autonomy and Coworker Support

Based on a past study conducted by Sia and Appu (2015), the authors had stated that the workplace autonomy namely method, schedule and criteria autonomy in the workplace have a positive influence towards workplace creativity. Attih & Agbarakwe (2021) had also stated that internship programs with high flexibility such as Teaching Practice (TP) should be included within internship programs among undergraduate students to encourage the development of creativity in the workplace. High participation rate among employees encourages different perspectives which in return stimulates creativity. According to Lee et.

al. (2021), coworker's support has a significant positive relationship in enhancing workplace creativity. Coworker support significantly increases workplace autonomy. However, according to a past study conducted by Van Mierlo et.al, (2006), the effects of coworker support on autonomy were restricted with increasing coworker support. Similarly, Marjolein et.al. (2022) stated that creativity has minimal association with coworker support under moderate levels of work autonomy. Therefore, research on the relationship between coworker support and workplace autonomy on workplace creativity should be conducted to understand the relationship between the factors affecting workplace creativity.

**Workplace Autonomy and Workplace Creativity**

According to Kahn (1990, as cited in Pattnaik & Sahoo, 2020), the concept of employee engagement as "harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances". Which indicates that the way employees engage and interact with their job and environment is a crucial key to employee performance. In a meanwhile, employee engagement was also indicated as one of the essential contributing factors to workplace creativity in affecting the level of task performance (Slatten and Mehmetoglu, 2011; Alfes et al., 2013; Eschleman et al., 2014, as cited in Pattnaik & Sahoo, 2020). Throughout the study done by Pattnaik & Sahoo (2020), they found that there is a relationship between employee engagement and creativity through the moderating effect of perceived workplace autonomy. Employees who are engaged and involved showed more dedication and enthusiasm and were more likely to contribute different ideas to their tasks (Pattnaik & Sahoo, 2020). According to componential theory of creativity (Ambile, 1988), it states the importance of workplace autonomy which contributes to workplace creativity, which autonomy was defined as "the degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the

procedures to be used in carrying it out" (Hackman & Oldham (1974, p. 162, as cited in Pattnaik & Sahoo, 2020). According to Hackman and Lawler (1971, p.264, as cited in Pattnaik & Sahoo, 2020), it further emphasized that it is the employees' experience in the workplace that matters towards their attitude and behavior, compared to their objective state.

Learning opportunities could contribute to a creative workplace, while autonomy and active engagement were described as the essential elements of workplace learning (Olmos-Vega et al., 2017). However, between the negotiation of employees and their supervisors, there may be tensions happening due to the level of autonomy given to the employees. Firstly, employees may feel tension when supervisors give too much autonomy and too many opportunities to participate. Secondly, supervisors give too little autonomy or too few opportunities to participate (Olmos-Vega et al, 2017). Employees may feel unprepared to take over the opportunities or autonomy given when the complexity of tasks is higher than expected or they are not well equipped with the skills required. This happens when supervisors overestimate their employees' capabilities or capacity of work. Employees may enlist support from their supervisors to "call for help" or reach out experienced peers when they feel the learning environment is unsafe. However, when little autonomy or opportunities are given, employees would feel that their supervisors are literally restricting their opportunities to be involved and their autonomy to make decisions, presuming they are not prepared to perform the task. In this case, employees may negotiate with their supervisors or turn into passive observers (Olmos-Vega et al., 2017).

According to Binnewies and Gromer (2012), having a high level of work control does not influence the idea creation of an employee. Moreover, a past study from Zhang et. al. (2016) stated that under certain circumstances, there is no positive relationship between work autonomy and creativity. Whenever the learning goal orientation is low, and the psychological performance pressure of the employee is high, the creative performance of the

employee tends to be irrelevant (Zhang et. al., 2016). Furthermore, from a study conducted by Lu et. al. (2017), work autonomy and workplace creativity are double-edged swords and could produce different outcomes based on the employee values on having work autonomy. The mixed findings regarding workplace autonomy and creativity signify the need to conduct research on workplace autonomy and creativity of students having internship experience in organizational environments.

**Coworker Support and Workplace Creativity**

Coworkers hold a significant role for an intern at work. Coworker support in workplace creativity involves both instrumental and emotional support through generating, communication, and implementation of ideas (Binnewies & Gromer, 2012). The daily social interaction at the workplace between both coworker and intern encourages sharing of information. According to Paramitha & Indarti (2014), coworkers provide resources such as information, ideas, and knowledge to stimulate the thought process and ultimately increase the capability to generate new ideas. Madjar (2008), stated that coworker support creates an environment which enhances creativity by increasing the willingness to share their ideas. Therefore, the presence of coworker support will increase the production of new ideas which is associated with increasing creativity (Paramitha & Indarti, 2014; Appu et. al., 2015). While individuals receive social or work support from coworkers, the interns will benefit from the experience as well as different ideas and solutions provided to them which ultimately leads to a more creative performance at work (Appu et. al., 2015). According to Kim (2019), creativity requires resources such as knowledge and stimuli such as situations to develop and does not appear within a dry and vacuum environment.

Filieri & Alguezaui (2014) also stated that knowledge is the raw material for developing creativity and the relay of knowledge within organizational employees will be the start of an

improved workplace creativity. Coworker support such as social cues as well as exchange of ideas are significant in fostering employees' creativity (Kim, 2019). Following that, Binnewies & Gromer (2012) stated that the greater the amount of support received from coworkers, the greater the number of resources such as thought process and skills available for developing creativity. Past research had shown that there was evidence of a positive relationship between coworker support and employee workplace creativity (Hammond et. al., 2011).

On the other hand, from a past study carried out by Zaitouni and Ouakouak (2018), although there is a significant positive relationship between coworker support and creativity, there is no relationship between coworker engagement in moderating coworker support and creativity. Moreover, according to Kim et. al. (2020), support from coworkers involving hierarchy produces a negative relationship with creativity. The author mentioned that employees would prioritize the support from individuals from higher roles as compared to workers who performed the same role. Therefore, individuals would opt for the supervisor's resources which would decide the salary, incentives as well as promotions and ignore the help from other individuals with less influence within the organization (Kim et.al, 2020). Although past studies have had mixed findings regarding the relationship between coworker support and creativity. However, the research papers are focused on employee level and there is still no research found on the relationship between coworker support and workplace creativity of students having internships at organizational level.

**Theoretical Framework**

**Componential theory of creativity.** According to a study by Amabile (2012), the componential theory of creativity is a comprehensive model of social and psychological elements that are necessary for producing a creative work. In this theory, there are four

components necessary for creative response. Three of them are within the individual and one component is outside the individual, which is the social environment in which the individual is working. The social environment or work environment includes all the extrinsic motivators like work autonomy and coworker support.

Componential theory of creativity emphasizes the role of workplace autonomy in improving an individual's creativity based on the definition of creativity as the production of ideas or outcomes that are both novel and appropriate to some goal. This theory claims that work autonomy is conducive to employee creativity (Amabile, 1988). Besides, Oldham & Cummings (1996) study found that the autonomy supportive supervisory style encourages employees to be more cognitively flexible and produce creative ideas and solutions persistently. Amabile & Gryskiewicz (1989) study found that work autonomy is the most important element of the working environment that boosts employee's creativity. Work autonomy perceived by employees may facilitate creative work performance as it helps in improving adaptability in the creative process (Ryan & Deci, 2000). According to Amabile & Mueller (2008) study, workplace creativity increases when employees experience high work autonomy in fulfilling their job or when they have a sense of control of their work process.

This theory also suggested that coworker support can improve workplace creativity. Paramitha & Indarti (2014) study found that coworker support can promote the creativity of the employees. Also, Appu & Surendra (2015) study found that employees' mutual respect and support can have a positive influence on their creative work performance.

**Conceptual Framework**
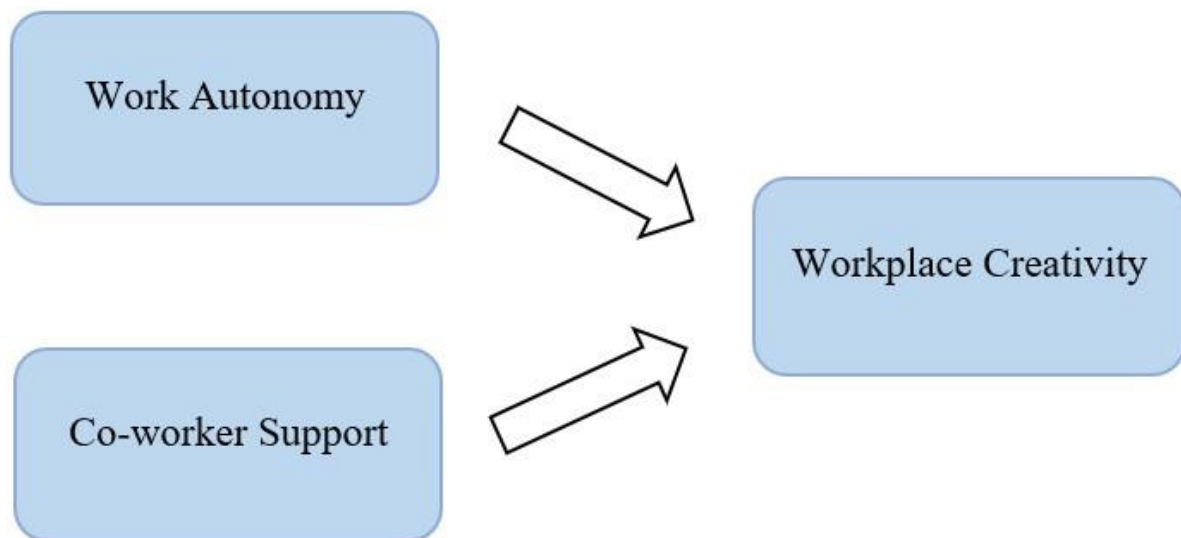


*Figure 1. Conceptual framework model*

Based on past research, the conceptual framework model is proposed and demonstrated as shown in Figure 1, which is about the relationship of work autonomy and coworker on workplace creativity. In this framework, work autonomy and coworker support are the predictor variable, while workplace creativity is the outcome variable. This study will examine the relationship between work autonomy and workplace creativity, the relationship between coworker support and workplace creativity, and whether both work autonomy and coworker support will predict workplace creativity.

## Chapter III

## Methodology

### Research design

This research utilized a cross-sectional research method to study the relationship between work autonomy and coworker support on workplace creativity, and prediction of work autonomy and coworker support on workplace creativity. The quantitative method was applied in this research for data collection and data analysis as this study did not involve manipulated variables and data were only collected once from the participants. The quantitative data would be collected using an online questionnaire by distributing it through an online survey (Qualtrics) to collect data from undergraduate interns in Malaysia. Utilizing quantitative research enables a larger number of participants to be recruited in a short time for data collection. It is also a cost- effective way as data would be collected once only (Wang & Cheng, 2020).

### Sampling technique

**Sample size.** This study used G-Power to evaluate the sample size with the expected effect size, $f^2 = 0.19$, statistical power level of 0.95 and error probability level of 0.05. The numbers of predictors were inserted as two which were work autonomy and coworker support. Based on the G-Power sample size calculator, the sample size for this study is 85. However, this study would recruit more than 150 participants for a more accurate result and to avoid some issues in the raw data like not truthful answers and incompatible data.

**Participants.** There was a total of 140 responses collected in this study. After removing uncompleted responses and incompatible data, 85 valid responses were retained for data analysis. In the present study, it involved 21 male respondents (24.7 percent) and 64

female respondents (75.3 percent). The age of respondents was between 19 to 27 years old. The respondents mostly were Chinese, and their quantity was 73 (85.9%), followed by eight Indian (9.4 percent), three Orang Asli (3.5%) and one Malay (1.2%). 76 of the respondents were in Year 3 (89.4%), eight Year 4 students (9.4%), and one Year 2 student (1.2%) participated in this study. Most of the respondents were studying in University Tunku Abdul Rahman with a quantity of 82 (96.5 percent), and one respondent (1.2 percent) was from University of Malaya, HELP University, and Management & Science University respectively.

**Sampling method**. The sampling technique that applied in this research is convenience sampling. It is a non-probability sampling technique and participants were recruited nonrandomly. It is fast and can be achieved easily (Jupp et al., 2011). By utilizing this sampling method, less time and lower cost are required for data collection. Many participants are expected to be recruited as convenience sampling enables participants to be accessed easily through the internet. Researchers can collect responses from participants who are currently doing their industrial training or those who have done it in a short period of time.

**Research Location**

This study was conducted at Universiti Tunku Abdul Rahman Kampar (UTAR) Campus in Perak, Malaysia. It is a private university, and majority of students are from different states of Malaysia. Since the undergraduate interns are the targeted population for this research, the students who are currently conducting their industrial training and the students who have completed their industrial training can contribute their experience or thought which is associated with this research for studying the relationship between work

autonomy and coworker support on workplace creativity, and prediction of work autonomy and coworker support on workplace creativity.

**Pilot study**

A pilot study was performed to measure the reliability of the instruments used in Malaysian context. An online questionnaire that contains all items of Work Autonomy Scale, Coworker Support Scale, and Creativity at Workplace Organization Scale were created and distributed to participants who fulfilled the requirement. The participants were requested to fill in their basic demographic information and a consent form. After data collection, a total of 106 responses were collected and seven responses were removed from the pilot study due to incomplete response. Finally, the number of responses that were involved in the pilot study was 92.

**Research procedure**

An online questionnaire was created using the Qualtrics platform. The participants were needed to complete a consent form to express their agreement in taking part in this research voluntarily. Only the respondents who agreed with the terms and conditions attached on the first and second page, which contains the purpose of the study and informed consent will be allowed to participate in this research. The consent form consisted of six questions and the respondents needed to answer all questions to show their willingness to participate in this anonymous survey voluntarily. By filling out the consent form, it showed that they agreed that their responses will only be used for academic purposes and their information and privacy will be kept confidential. After completing the consent form, they will be asked to complete the questionnaire. The questionnaire requested respondents to complete an informed consent form, demographic information, and education level. Then, the respondents had to spend around five minutes answering the questionnaire in English. To collect

responses from target respondents, the survey link with description was sent to people around us who fulfill the requirement using "WhatsApp" and was being shared on "Facebook". Also, we went to UTAR library and politely asked UTAR students who fulfilled all requirements to help in contributing their data. In addition, a private message of survey link with description was sent to potential participants using "Microsoft Teams". If the respondents had any inquiries, they were welcome to contact us through the email provided in the description. After data collection, the data was transferred to IBM SPSS Statistics version 23 for further analysis.

**Instruments**

Three instruments are used in the current study to examine the relationship between workautonomy and coworker support on workplace creativity, and prediction of work autonomy and coworker support on workplace creativity. Then, nine questions were designed to obtain demographic information of participants.

**Demographic Information.** The respondents were requested to fill in their demographic information such as age, gender, ethnicity, educational level, current institution, course of study, and year of study. Then, they had to answer whether they had completed their internship program and the duration of their internship program.

**Work Autonomy Scale.** This scale is generated by Breaugh (1985). This scale consists of nine items and three aspects of work autonomy are measured by three items each which are method autonomy, scheduling autonomy, and criteria autonomy. A sample item of method autonomy is: I am free to choose the method(s) to use in carrying out my work. Then, a sample item of scheduling autonomy is: I have control over the scheduling of my work. Besides, a sample item of criteria autonomy is: My job allows me to modify the normal way we are evaluated so that I can emphasize some aspects of my job and play

down others. The items are measured using a five-point Likert scale (1 = Strongly

Disagree, 2 = Disagree, 3 = Disagree Slightly, 4 = Neither Agree Nor Disagree, 5 =

Slightly Agree, 6 = Agree, 7 = Strongly Agree). The scores of all items will be summed up

and higher values reflect greater autonomy. The Coefficient Alpha for method autonomy,

schedulingautonomy, and criteria autonomy are .93, .88, and .85 (Breaugh, 1999), and the

average value obtained was .89.

**Coworker Support Scale.** Settoon and Mossholder (2002) measures are utilized to

assess coworker support. There are six items to measure instrumental support and eight

items tomeasure emotional support. A sample item of instrumental support is: My

coworkers help me when I'm running behind in my work. A sample item of emotional

support is: My coworkers try to cheer me up when I'm having a bad day. The respondents

will indicate the extent to which they agree with each statement with a five-point Likert

scale (1 = strongly disagree, 5 = strongly agree). The scores of all items will be summed up

and higher values reflect greater coworker support. The Cronbach's alpha for the scale was

.87 (Tews et al., 2013).

**Creativity at Workplace Organization Scale.** This scale is generated by Musek

(2020) and it measures the level of creativity at the workplace by measuring how much the

employees view their organization as fostering and rewarding creativity. A sample item

this scale includes,"Fosters finding new ways of doing things". There are a total of 20

items, and they are measured using a five-point Likert scale (1 = no characteristic at all, 5

= highly characteristic). The respondents who score below 30 means that they see their

organization has low responsibility infostering and rewarding creativity. The respondents

whose scores are between 30 and 40 meanthat they see their organization has under

average responsibility in fostering and rewarding creativity. Those whose scores are

between 40 and 60 mean that they see their organization has average responsibility in fostering and rewarding creativity. Respondents who obtain scores between 60 and 70 means that they see their organization has over average responsibility in fostering and rewarding creativity. Lastly, respondents who score above 70 mean that they see their organization has high responsibility in fostering and rewarding creativity.

**Data Cleaning**

A total of 140 responses were collected in the present study. There were 55 cases that were excluded due to incomplete answers, or the respondents did not fulfill the requirements. After removing incompatible data, a final 85 responses were obtained for further data analysis.

**Data Analysis Plan**

After data collection is completed, analysis of collected data will be performed using Statistical Package for Social Science (SPSS). Data analysis will be run to identify the descriptive statistics, including mean and standard deviation, frequency for descriptive statistics, outliers through screening, and the total scores from Work Autonomy Scale, Coworker Support Scale, and Creativity at Workplace Organization Scale. Then, the correlation coefficient will be evaluated to identify the inferential statistics by performing Pearson Correlation Coefficient to answer the first and second research questions to scrutinize the association between workplace autonomy and coworker support on the workplace creativity. This significance level for the findings is fixed to be less or equal to 0.05 as the significance level for hypothesis testing in which the P value less than or equal to alpha ($\alpha$) is considered as statistically significant. Then, multiple linear regression will be conducted to test if work autonomy and coworker support significantly predict workplace creativity among Malaysia undergraduate interns.

To determine whether the target population is normally distributed, the normality of the data is examined through skewness and kurtosis. To support normal univariate distribution, the acceptable range for skewness and kurtosis value are within the range of ±2 (Gravetter & Wallnau, 2014). Furthermore, Kolmogorov-Smirnov Test (KS test) would be conducted as it can determine some specified continuous distribution (Lilliefors, 1967) and the quantile-quantile (Q- Q) plot would be referred for distributional evaluation (Wilk et al., 1968).

To assess the multicollinearity of predictors which are work autonomy and coworker support, Tolerance and the Variance Inflation Factor (VIF) is used. Hair et al. (2010) study indicates that there is a low association between predictors when Tolerance value ≥ .10 and VIF value ≤ 10. Normality of residual, linearity of residual, and homoscedasticity are accessed using scatterplot. Then, Durbin Watson will be used to test the assumption of independence of errors. Norusis (1999) study indicates that the value closer to 2 showed congruent to the assumption and value < 1 or > 3 violates the assumption.

The reliability test was conducted for the pilot study. The alpha Cronbach's coefficient for Work Autonomy Scale was (α = .89), while the alpha Cronbach's coefficient for Coworker Support Scale was (α = .92), and the alpha Cronbach's coefficient for Creativity at Workplace Organization Scale was (α = .94). According to Hinton et.al study (2004), the value of Cronbach's Alpha of .8 is considered highly reliable. The results were shown in Table 3.1, and it showed that all three instruments have a higher reliability value.

In the actual study, the alpha Cronbach's coefficient for Work Autonomy Scale was (α = .86), followed by the alpha Cronbach's coefficient for Coworker Support Scale was (α = .92), and the alpha Cronbach's coefficient for Creativity at Workplace Organization

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Scale was ($\alpha$ = .94). There was no past study on reliability of Creativity at Workplace

Organization Scale found, but the results of our pilot study and actual study indicated that

it has high reliability. The results for the reliability test were shown in Table 3.1 and it

showed that all the instruments were highly reliable.

**Table 3.1**

*Reliability of the Instrument*

| Variable | No. of Items | Cronbach Alpha | | |
|---|---|---|---|---|
| | | Past study | Pilot study | Actual study |
| Work Autonomy Scale | 9 | .89 | .889 | .860 |
| Coworker Support Scale | 14 | .87 | .921 | .917 |
| Creativity at Workplace Organization Scale | 20 | | .936 | .942 |

**Chapter IV**

**Results**

**Introduction**

For chapter IV, the test of normality was conducted to determine the normality of the distribution. Continuous distribution of the data was tested with Kolmogorov-Smirnova Test (KS Test) and Shapiro-Wilk Test (SW Test), whereas Q-Q plot and histogram were also plotted to determine the normality of the distribution. Following that, demographic data were grouped and tabulated accordingly to provide a clearer picture of the demographic of the target respondents. Moreover, correlation analysis was conducted to determine the relationship between the variables. Lastly, a multiple regression analysis was conducted to determine if the variables workplace autonomy and coworker support can predict workplace creativity.

**Normality Tests**

**Table 4.1**

*Skewness and Kurtosis*

| | Skewness | | Kurtosis | |
| --- | --- | --- | --- | --- |
| | Statistic | Standard Error | Statistic | Standard Error |
| Workplace Autonomy (WA) | .016 | .261 | -.597 | .517 |
| Coworker Support (CS) | -.431 | .261 | 1.536 | .517 |
| Workplace Creativity (WC) | -.558 | .261 | .548 | .517 |

*Note: Significant at p<.05.*

The normality of distribution of the population was determined through the test of normality via skewness and kurtosis. According to Gravetter & Wallnau (2014), the acceptable range for normal and univariate distribution falls between the ranges of ±2. According to Table 4.1, the normality assumptions of the distribution are met. Following that, referring to Figure 2 to Figure 7 (from the appendix), the Q-Q plot of each distribution was close to the normal distribution line for all the variables. The histogram has also shown a bell curve for the distribution of each variable. Therefore, the normality assumptions of all the variables are met.

**Table 4.2**

*Kolmogorov-Smirnov & Shapiro-Wilk Test*

|  | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
| --- | --- | --- | --- | --- | --- | --- |
|  | Statistic | df | Sig. | Statistic | df | Sig. |
| Workplace Autonomy | .067 | 85 | .200* | .982 | 85 | .018 |
| Coworker Support | .077 | 85 | .200* | .982 | 85 | .273 |
| Workplace Creativity | .080 | 85 | .200* | .978 | 85 | .147 |

*\* This is a lower bound of the true significance.*
*a Lilliefors Significance Correction*

For the test of normality, the Kolmogorov-Smirnov test was used as it was appropriate to determine sample size of higher numbers ($n \geq 50$). According to Table 4.2, the significant value for all the variables is greater than the confidence interval $p > .05$. Therefore, the data for the null hypotheses are all accepted following a normal distribution. However, the Kolmogorov-Smirnov test indicates that there is a need for higher number of sample size due to the lower bound of true significance. Although the Shapiro-Wilk test is more appropriate

to measure a smaller sample size ($n$<50), but the test can still measure up to the sample size

collected. Therefore, the test results are obtained to interpret the normality of the distribution

of the variables. The significant value from the variables needs to be within the confidence

interval set where $p$ >.05 in order to be within a normal distribution. From Table 4.2, the

results indicate that both the variable coworker support (D (85) = .98, $p$ = .273) and

workplace creativity (D (85) =0.98, $p$ = .147) follow a normal distribution. However, the

Shapiro-Wilk test indicates that the distribution of workplace autonomy (WA) does not

follow a normal distribution, D (85) = 0.98, $p$ = 0.018. The significant value of the variable

WA showed a significant value lower than confidence interval $p$<.05, therefore, the data of

the variable WA deviates from a normal distribution according to the value shown $p$ =

0.018<.05.

**Demographic Information**

**Table 4.3**

*Descriptive statistics*

|  | ***n*** | **%** | **mean** | **Standard Deviation** |
|---|---|---|---|---|
| **Demographic Information** |  |  |  |  |
| Age |  |  | 22.38 | 2.58 |
| **Gender** |  |  |  |  |
| Male | 21 | 24.7 |  |  |
| Female | 64 | 75.3 |  |  |
| **Ethnicity** |  |  |  |  |
| Malay | 1 | 1.1 |  |  |
| Chinese | 73 | 85.9 |  |  |
| Indian | 8 | 9.4 |  |  |
| Others | 3 | 3.6 |  |  |
| **Internship** |  |  |  |  |

| Undergoing | 16 | 18.8 |
| --- | --- | --- |
| Completed | 69 | 81.2 |

From Table 4.3, the present study had collected a total number of 85 valid responses after careful screening of valid responses. All the participants are Malaysian with an average age of 22.38 years old. Among the participants, 24.7% of the participants are male ($n = 21$) whereas the remaining 75.3% are female ($n = 64$). Ethnicity wise, 1.1% of the participants are Malay ($n = 1$), 85.9% are Chinese ($n = 73$), 9.4% are Indian ($n = 8$), and 3.6% *($n = 3$)* are from the minor ethnicity other than the major ethnicity mentioned above. Out of all the 85 participants, 18.8% ($n = 16$) are still undergoing internship or industrial training whereas 81.2% ($n = 69$) had already completed their internship or industrial training.

**Pearson Correlation**

Pearson product-moment correlation was run to determine the linear relationship between the variables workplace autonomy (WA) and coworker support (CS) with workplace creativity (WC). The test indicates the magnitude of association as well as direction of relationship, either positive or negative, through the coefficient value. The range of the coefficient value is within ±1. The coefficient value -1 indicates a perfect negative relationship whereas +1 indicates a positive relationship between the variables measured. On the other hand, a coefficient value of 0 indicates that there is no relationship between the variables. The coefficient values from 0 to 1 are differentiated into different degrees of correlation such as strong, medium, and weak correlation. The *p*-value of the Pearson product-moment correlation test was obtained to determine whether to reject the null hypothesis. In order to accept the null hypothesis obtained, the *p*-value determined is required to be greater than the significance level of $\alpha > .05$. Therefore, any value of $p < .05$ is determined as rejecting the null hypothesis.

**Table 4.4**

*Correlations between Workplace Autonomy (WA) and Workplace Creativity (WC)*

|  | WC | | |
| --- | --- | --- | --- |
|  | *r* | *p* | *n* |
| WA | .491** | .000 | 85 |

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

$H_0 1$: There is no significant relationship between workplace autonomy and workplace creativity among undergraduate interns in Malaysia.

The Pearson product-moment correlation was run to determine the linear relationship between both Workplace Autonomy (WA) and Workplace Creativity (WC). Table 4.4 shows a medium positive association ($\pm.3 \leq r \pm .5$) between both WA and WC variables. ($r = .491$, $n = 85$, $p = .000 < .05$). Therefore, we conclude that the $H_0 1$ was rejected, and the correlation is statistically significant.

**Table 4.5**

*Correlations between Coworker Support (CS) and Workplace Creativity (WC)*

|  | WC | | |
| --- | --- | --- | --- |
|  | *r* | *p* | *n* |
| CS | .276* | .011 | 85 |

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

$H_0 2$: There is no significant relationship between coworker support and workplace creativity among undergraduate interns in Malaysia.

Similarly, A Pearson product-moment correlation was run to determine the relationship between Coworker Support (CS) and Workplace Creativity (WC). Table 4.5 shows a weak,

positive relationship ($\pm.1\leq r \pm .3$) shared between the two variables, ($r = .276$, $n =85$, $p =.011$ $<.05$). Therefore, we concluded that the $H_02$ was rejected, and the data was statistically significant.

**Regression Analysis**

Referring to the linear scatterplot model (Figure 2, Figure 4, and Figure 6 from appendix) of both independent variables on dependent variable, it is determined that a multiple regression analysis will be conducted to determine whether workplace autonomy and coworker support can predict workplace creativity.

**Table 4.6**

*Multiple regression analysis of workplace autonomy and coworker support on workplace creativity.*

|  | | | Workplace Creativity | | | | |
|---|---|---|---|---|---|---|---|
|  | $t$ | $\beta$ | $p$ | $F$ | d.f. | Sig. | Adj. |
| Workplace Autonomy | 4.221 | .355* | .000 | 35.617 | 84 | .000 | .452 |
| Coworker Support | 5.861 | .493* | .000 | | | | |

*Note*$p <.05$

$H_03$: Workplace autonomy and coworker support will not predict workplace creativity among undergraduate interns in Malaysia.

The model was statistically significant with $F$ (2, 84) = 35.617, $p< .001$ and accounted for 45.2 % of the variance. Other than that, the independent variable coworker support can predict workplace creativity better than workplace creativity, $\beta =.493$ and $\beta =.355$. Following that, the null hypotheses, $H_03$ is rejected as the significant value is lower than the significance level of $p= .05$

**Summary of Chapter**

Through different runs of normality tests, the skewness and kurtosis showed a normal distribution of the sample size. However, the SW test determined that the workplace autonomy does not follow a normal distribution whereas the KS test requires more sample size to be significant. The Pearson product-moment test produced results that show positive relationships between workplace autonomy and workplace creativity as well as between coworker support and workplace creativity. Lastly, the regression analysis shows that the both the variables workplace autonomy and coworker support can predict the workplace creativity of internship undergraduate students in Malaysia.

**Chapter V**

**Discussion and Conclusion**

**Discussion**

*Introduction*

In accordance with the main objective of the study, to investigate the relationship between workplace autonomy, coworker support, and workplace creativity, the present study had produced results which show positive correlation between the variables. The results proved that there is positive relationship between workplace autonomy and coworker support with workplace creativity. Furthermore, the present study also indicates that both workplace autonomy and coworker support are able to predict workplace creativity.

*Relationship between workplace autonomy and workplace creativity*

The Pearson product-moment correlation shown that there is a significant positive relationship between workplace autonomy and workplace creativity among undergraduates who had either completed or undergoing internship or industrial training. $r = .491, n = 85, p < .05$. Therefore, the null hypothesis suggested by the present study that there are no significant relationship between workplace autonomy and workplace creativity among undergraduates in Malaysia was rejected.

The results obtained from the present study shows similarity with past studies from Khoshnaw & Alavi (2020) whereby the authors concluded that individuals with high job autonomy in workplace produces greater job performance. The reason suggested by Khoshnaw & Alawi (2020) are individuals provided with high job autonomy get to experience continuous learning through raising self-efficacy in completing complexed tasks which in return raises their job performance. Similarly, from a study conducted by Orth &

Volmer (2017), the study concluded that there is a relationship between jo b autonomy and creative behaviours. The authors followed up with the statement that innovative behaviours are encouraged with the presence of increasing self-efficacy through job autonomy. Therefore, job autonomy encourages an individual's creativity to grow and ultimately increases self-efficacy in work as well as work performance. A study carried out by Sia and Appu (2015) investigating the relationship between workplace autonomy and workplace creativity had also shown the same results as the present study whereby there is a significant relationship between workplace autonomy and workplace creativity. The authors had also suggested the addition of level of complex tasks as a moderator to increase workplace creativity of the individuals.

On the other hand, past study had also found that excessive job autonomy produces negative job performance. A study conducted by Lu et al., (2017) proved that too much job autonomy provided to an individual produced negative results. Aside from that, the authors also added, suggesting that the higher the job autonomy, the higher the possibility for the individuals to commit unethical behaviours. Following that, according to a study conducted by Olmos-Vega et al., (2017), excessive work autonomy will lead to an increase in perceived stress. The authors stated that excessive work autonomy on inexperienced individuals will perceive the extra responsibilities as too complex to be completed individually which ultimately became stressful. Although the variable work autonomy shares a significant relationship with work creativity. However, there are past studies which provided inconsistencies in terms of results. Therefore, moderating effect of variables could be investigated in the future studies to understand more about the strength between the relationships (Noureen et al., 2021).

*Relationship between coworker support and workplace creativity*

From the results of the present study, the Pearson product-moment correlation showed that there is a significant positive relationship between coworker support and workplace creativity for undergraduates who are either undergoing internship or had completed the internship experience. $r = .276$, $n = 85$, $p < .05$. Therefore, the null hypothesis suggested by the present study in which there are no significant relationship between coworker support and workplace creativity was rejected.

The results obtained from the present study share similar results from the past study. One past study conducted by Attiq et al., (2017) stated that coworker support has a significant positive relationship with workplace creativity. The authors added that coworker support encourages individuals to be involved in tasks and increases the self-esteem of the individuals at work. This ultimately leads to the individuals being encouraged to engage in creative work behaviour as there is positive support from the coworkers. Similarly, a study conducted by Zaitouni and Ouakouak (2017) believed that positive coworker support enables individuals to be more productive and creative. Moreover, a study from Pattnaik and Sahoo (2020) stated that coworker support in the form of engagement creates a positive experience which encourages individuals to work in a creative manner. The author added that positive experiences increase the willingness of individuals to explore more options in work and increase their level of awareness through expending their creative resources from the coworkers. In accordance with this, a past study conducted by Appu and Sia (2015) stated that support from coworker is likely to increase the creative production of the individuals. The authors had also added that the effect of coworker support acted as the catalyst to increase the individual's interest at work which ultimately increases the motivation to perform better at work. Therefore, based on past studies as well as present study, there exists a positive relationship between coworker support and workplace creativity.

***Workplace autonomy, coworker support, and workplace creativity***

The main objective of the present study is to investigate the relationship of workplace autonomy and coworker support with workplace creativity. The findings proved that both workplace autonomy and coworker support share a positive significant relationship with workplace creativity among undergraduates who are undergoing or had completed their internship. From the findings, it is also proved that the variable coworker support predicts workplace creativity better than workplace autonomy. $\beta =.493$ and $\beta =.355$. Following that, the results obtained rejected the null hypothesis suggested in the present study whereby the workplace autonomy and coworker support will not predict the workplace creativity among undergraduate interns in Malaysia.

The present study had indicated that workplace autonomy can predict workplace creativity which is consistent with past study conducted by Truer and McMurray (2012). The past study concluded that one of the factors which could predict an individual's creativity at work is autonomy provided in the work environment. Furthermore, the same study had also mentioned that coworker cohesion, or coworker support functions to reduce conflict as well as enhance communication within the team which ultimately predicts the workplace creativity. Other than that, in a past study conducted by Hammond et al., (2011), workplace autonomy may be an important factor in predicting the creativity of an individual in the workplace. The authors suggested that workplace autonomy which is under organizational climate enhances workplace creativity through providing the individuals with freedom to have options as well as to make decisions on the method and resources.

## *Summary of Discussion*

In conclusion, the present study provided findings which rejected the null hypotheses suggested and this achieved the objectives of the study which is to investigate the relationship between workplace autonomy, coworker support, and workplace creativity among

undergraduate interns in Malaysia context. The results obtained are consistent with the past studies which indicated that workplace autonomy and coworker support shares a positive significant relationship with workplace creativity (Aneesh et al., 2015; Attiq et al., 2017; Khosnaw & Alawi, 2020; Lu et al., 2017; Noureen et al., 2021; Olmos-Vega et al., 2017; Orth & Volmer, 2017; Pattnaik & Sahoo, 2020; Zaitouni & Ouakouak, 2018)). Furthermore, the positive predictability of workplace autonomy and coworker support onto workplace creativity is consistent with findings from previous studies as well (Hammond et al., 2011; Truer & McMurray, 2012). The findings suggested that workplace autonomy and coworker support both contribute towards the level of workplace creativity.

**Limitations of Current Study**

Hereby to consider and address the limitations of the current study. Firstly, convenience sampling method was used in the data collection procedure, due to time, cost, and manpower constraints. Hence, there is a possibility of selection bias due to non-probability sampling, which the collected sample might not be convincing to represent the respective population.

Secondly, cross-sectional study was used in data collection, which is unlikely to trace the long-term changes of the independent variables which contribute to the dependent variable. Hence, the causal-effect relationship between variables was not sufficient to draw from the findings.

The third limitation of the current study is the language barrier. As the instruments were just distributed in English as the only medium of language, it may be causing misunderstandings or difficulties for the participants, as majority of our sample are Chinese (85.9%), which is less likely to be native speaker in English language.

The fourth limitation is generalizability. As mentioned in the third limitation, there is an imbalance distribution of demographic percentage among participants, which Chinese (85.9%); females (75.3%) also weighted higher than males. In addition, 81.2% of respondents already completed their internship while the rest of the minority sample are currently undergoing internship duration (18.8%), which shows high contrast within these two criteria. The imbalance rate of response in gender and ethnicity might not be represent the Malaysian population in general.

**Recommendations for Future Study**

To address the first limitation regarding the possibility of selection bias, it is recommended for future researchers to conduct research study through probability sampling, as it could increase the likelihood to cover the whole population in general as much as possible.

Since cross-sectional study is not sufficient to draw the causal-effect relationship between variables, it is recommended to use longitudinal study method in order to determine the causal-effect relationship between the variables, as which the causal-effect findings are more competent to generate solution on the specific issues.

Hence, it is recommended for further studies to convert the instruments into different language versions for the limitation of language barrier, such as Malay and Mandarin. It would be ideal to evaluate if all the items are clearly delivered with instructions and the meanings in each language.

The last recommendation to improve generalizability for future studies which is to include a larger sample size, at the meantime, balance across races and gender profile, to minimize selection bias in order to be more sufficient in order to represent the diverse Malaysian population.

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**Implication of the study**

*Theoretical Implications*

Creativity has been a more critical factor required in job performance and it is essential to bring performance up to a whole new level. The present study provided a more in-depth insight of the Componential Theory of Creativity, which emphasizes the importance of workplace in enhancing individual's creativity (Amabile, 1988). It provides a different perspective which beyond how workplace autonomy can improve a person's creativity in work, however, in combination with coworker support, organizations and employers are able to build a workplace environment which sparks and enlighten creative and innovative performance among employees.

Furthermore, there is a lack of existing study that relates workplace autonomy and coworker support in contributing workplace creativity specifically. Workplace autonomy and coworker support are both factors that come from the environment, such as supervisors and coworkers, in two different dimensions. In determining the correlation between the two factors, the efficient way of interpersonal or intergroup communication and interaction in an organization could be found effectively.

*Practical Implications*

Studies targeting the sample of undergraduates' internship experiences are lacking as well. Along with the rise of tertiary education needs in society, internship or industrial training has become an unavoidable stage to completion of study. However, the situation and scenario faced by interns could not mark equivalent to regular employees, due to the differences in duration and the levels of commitment. At the individual level, the study provides undergraduates who are currently having or going to have internships to further understand how the interpersonal workplace environment benefits or withdraws their

creativity performance; at the organizational level, employers are able to enhance the

workplace environment in order to provide employees a better workplace to perform more

creatively.

Moreover, the findings can be related to other relevant studies regarding creativity in

other environments as well, contexts such as family and classrooms. School counselors or

educational parties could organize talks or workshops to let students understand that

environment could be a factor in enhancing individual's creativity as well. In which,

individuals are able to get prepared with sufficient knowledge and understanding before they

step into the workplace.

**Conclusion**

In conclusion, the current findings support the hypothesis and successfully fulfilled

the objective of the study which intended to determine the relationship between workplace

autonomy and the coworker helping and support on the workplace creativity among

undergraduate interns in Malaysia. Both workplace autonomy and coworker support share

positive relationship with workplace creativity *(r = .491, n =85, p <.05; r = .276, n =85, p

<.05)*. Other than that, the present study had also proved that the variables workplace

autonomy and coworker support are able to predict workplace creativity. (β= .355, *p< .05;*

β= .493, *p<.05)*.  The results are in line with previous findings.

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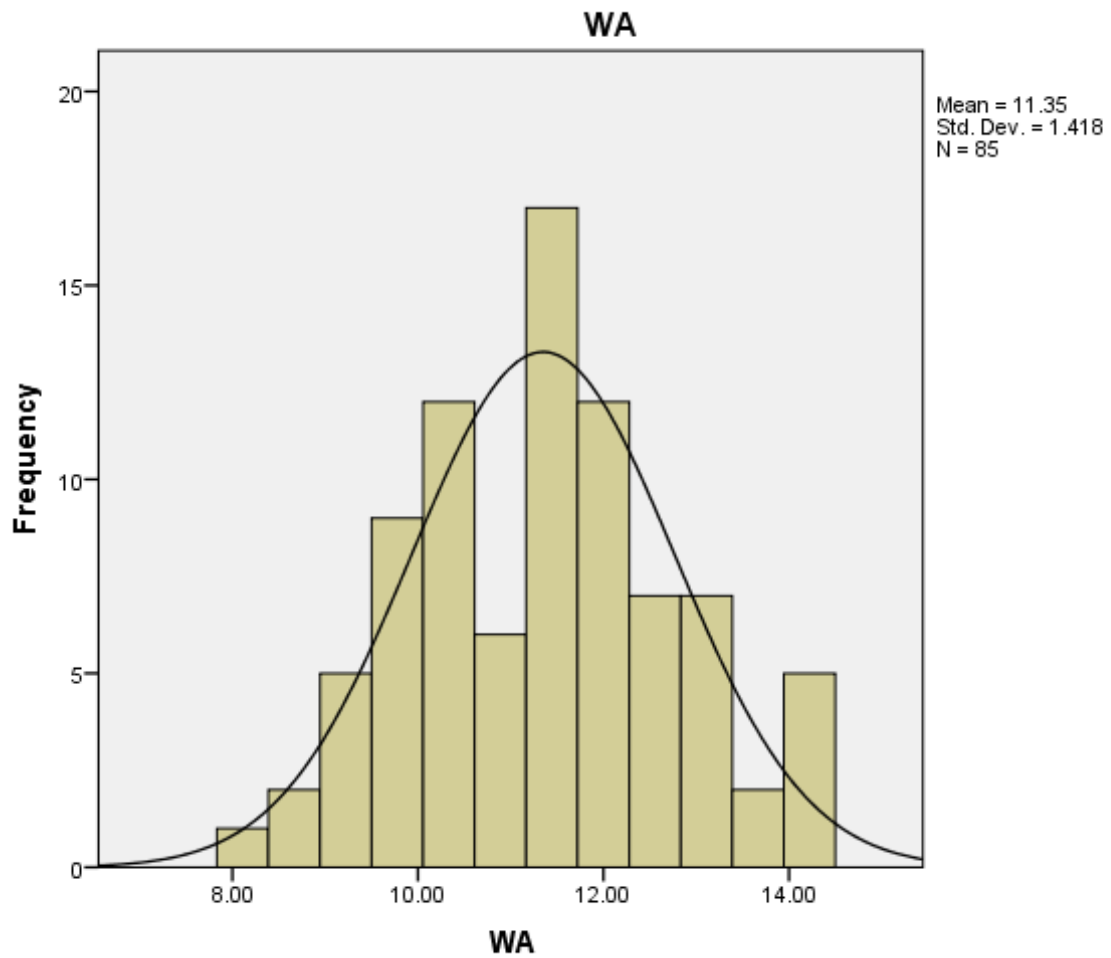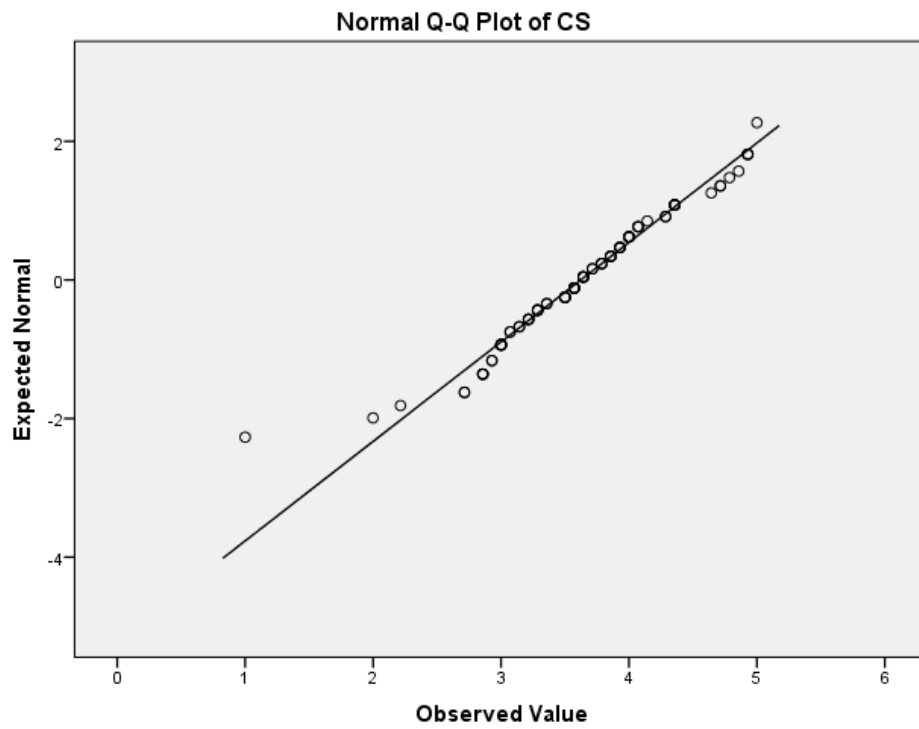
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**Appendix A**

**Figures**

**Figure 2: Normal Q-Q plot of Work Autonomy (WA)**
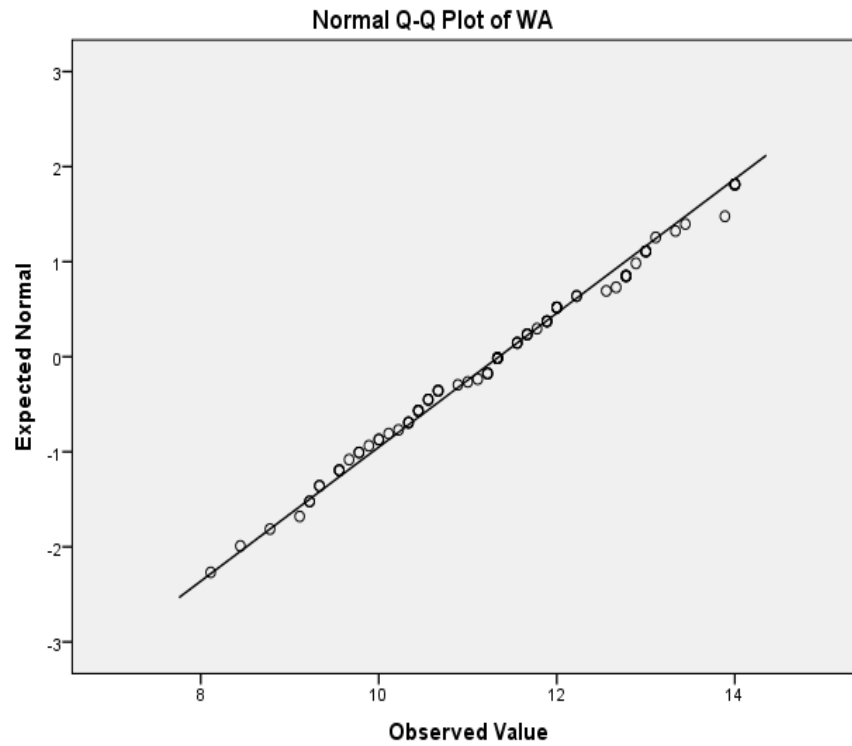


Normal Q-Q Plot of WA

WORK AUTONOMY AND COWORKER SUPPORT ON WORKPLACE CREATIVITY

**Figure 3: Histogram of Work Autonomy (WA)**



WA

**Figure 4: Normal Q-Q plot of Coworker Support (CS)**



Normal Q-Q Plot of CS

**Figure 5: Histogram of Coworker Support (CS)**

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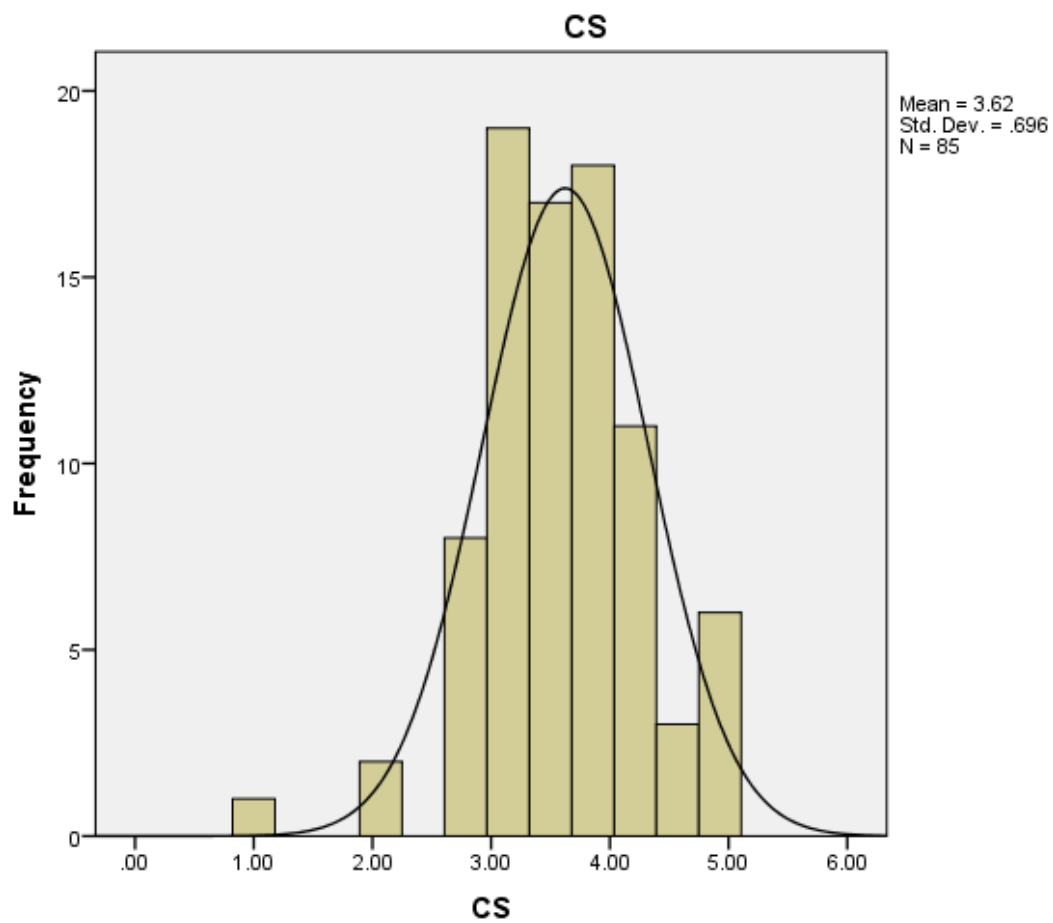
**Figure 6: Normal Q-Q plot of Workplace Creativity (WC)**
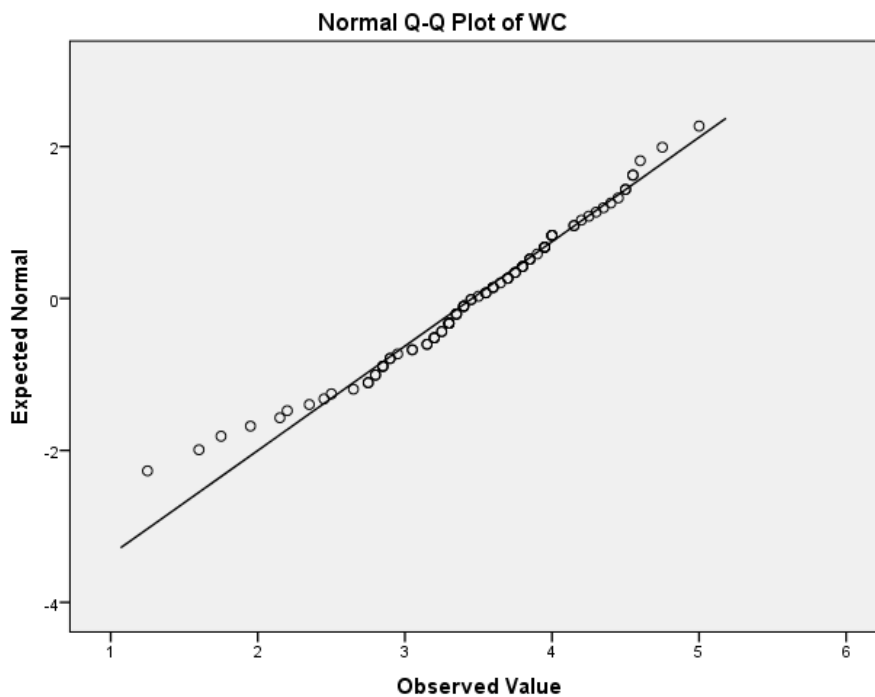
**Figure 7: Histogram of Workplace Creativity (WC)**
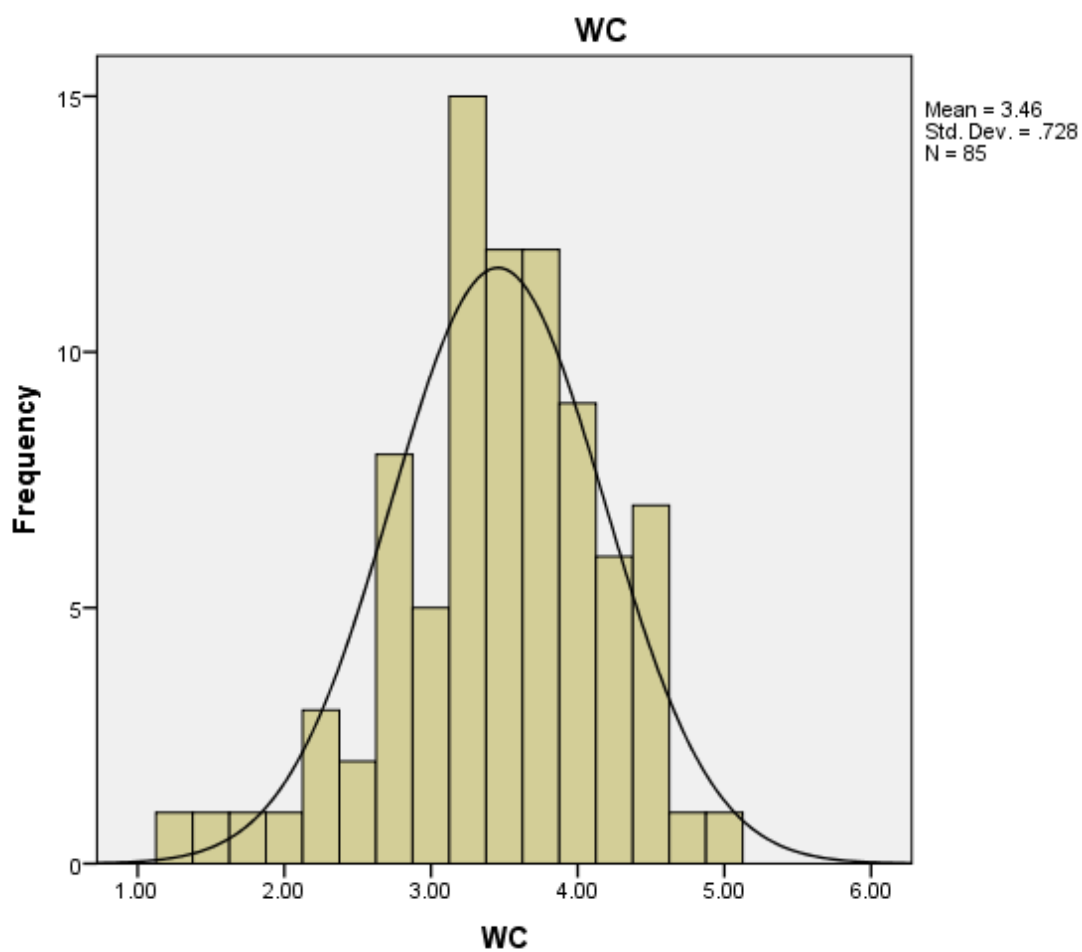
WORK AUTONOMY AND COWORKER SUPPORT ON WORKPLACE CREATIVITY

**Figure 8: G Power for Sample Size**
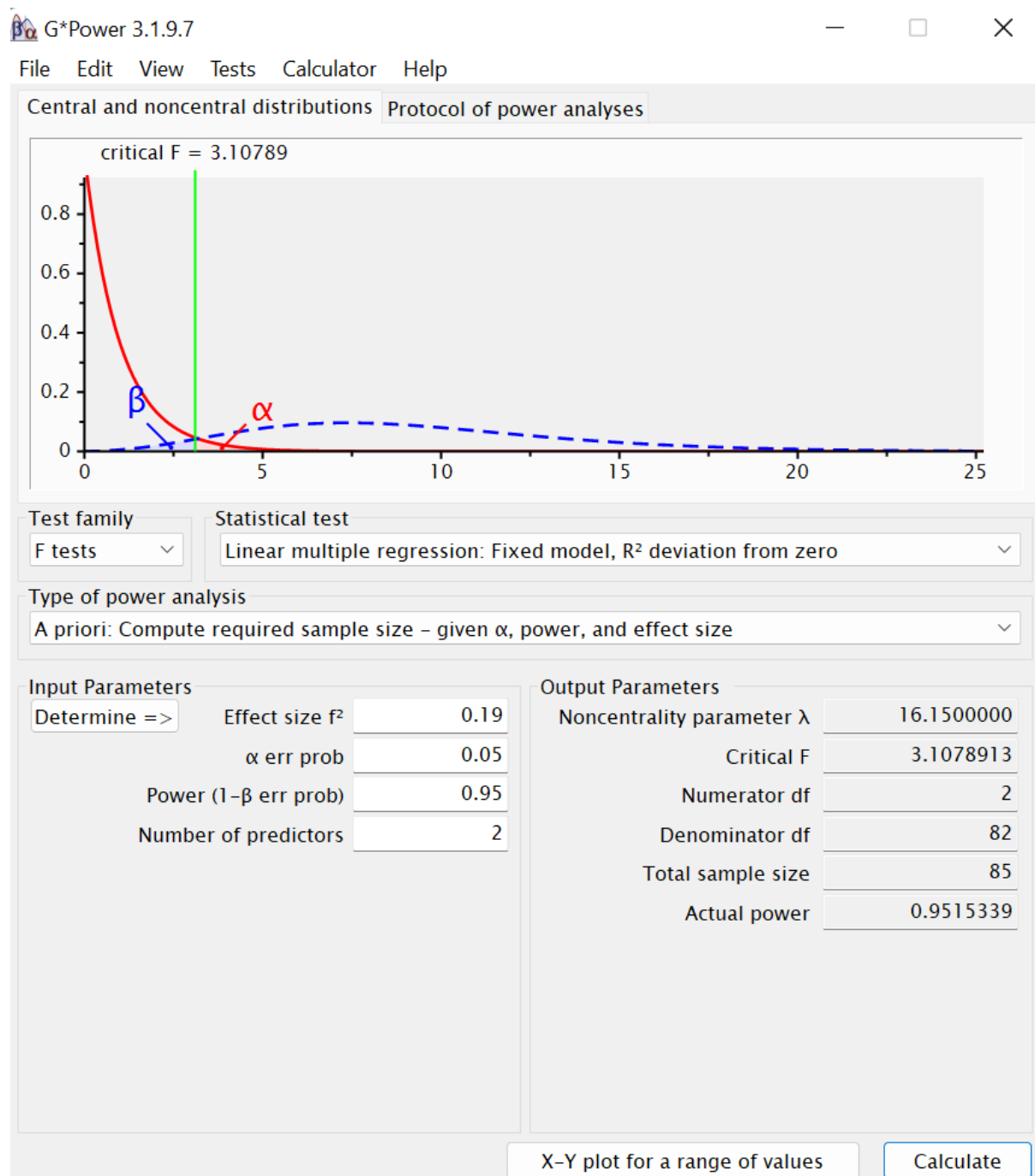
**Appendix**

**Informed Consent Form & Questionnaire Sample**

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DU012(A)

**Default Question Block**

**Personal Data Protection Statement**

In accordance with Personal Data Protection Act 2010 ("PDPA") which came into force on 15 November 2013, Universiti Tunku Abdul Rahman ("UTAR") is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

Notice:

1. The purposes for which your personal data may be used are inclusive but not limited to:-

- For assessment of any application to UTAR

- For processing any benefits and services

- For communication purposes

- For advertorial and news

- For general administration and record purposes

- For enhancing the value of education

- For educational and related purposes consequential to UTAR

- For the purpose of our corporate governance

- For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/ study loan

2. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.

3. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.

4. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

**Consent Form for Research Participation and Personal Data Protection**

Title of Project: Learning environment, academic stress, and quality of parent-adult-child relationship as predictors of psychological distress during Covid-19 pandemic among undergraduate students in Malaysia.

**NOTE:** This consent form will remain with the UTAR researchers for their records.

I understand I have been asked to take part in the research project specified above by UTAR students for the purpose of their course assignment for UAPZ3023 FINAL YEAR PROJECT II. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records.

|  | Yes | No |
|---|---|---|
| I will be asked to complete a questionnaire about the learning environment, academic stress, quality of parent-adult-child relationship, and psychological distress during the Covid-19 pandemic among undergraduate students in Malaysia. | O | O |
| My participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way | O | O |
| I may ask at any time for my data to be withdrawn from the project | O | O |
| No information I have provided that could lead to the identification of any other individual will be disclosed in any reports on the project, or to any other party | O | O |
| I will remain anonymous at all times in any reports or publications from the project | O | O |
| It is my sole responsibility to look after my own safety for the above project. In the event of any misfortune or accidental injury involving me, whether or not due solely to personal negligence or otherwise, I hereby declare that UTAR shall not be held responsible. | O | O |

By submitting this form, I hereby authorise and consent to UTAR processing (including disclosing) my personal data and any updates of my information, for the purposes and/or for any other purposes related to the purpose.

I acknowledge that if I do not consent or subsequently withdraw my consent to the processing and disclosure of my personal data, UTAR will not be able to fulfil their obligations or to contact me or to assist me in respect of the purposes and/or for any other purposes related to the purpose.

**PART A**

*Instructions: Please read the following statements and for each, choose the number that best represents **you in the workplace during internship**. The rating scale is as follows:*

| Strongly Disagree | Disagree | Rather Disagree | Neutral | Rather Agree | Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| I am allowed to decide how to go about getting my job done (the methods to use). | O | O | O | O | O | O | O |
| I am able to choose the way to go about my job (the procedures to utilize). | O | O | O | O | O | O | O |
| I am free to choose the methods to use in carrying out my work. | O | O | O | O | O | O | O |
| I have control over the scheduling of my work | O | O | O | O | O | O | O |
| I have some control over the sequencing of my work activities (when I do what). | O | O | O | O | O | O | O |
| My job is such that can decide when to do particular work activities. | O | O | O | O | O | O | O |
| My job allows me to modify the normal way we are evaluated so that I can emphasize some aspects of my job and play down | O | O | O | O | O | O | O |

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| some aspects of my job and play down others. | | | | | | | |
| I am able to modify what my job objectives are (what I am supposed to accomplish) | O | O | O | O | O | O | O |
| I have some control over what I am supposed to accomplish (what my supervisor sees as my job objectives). | O | O | O | O | O | O | O |

## PART B

*Instructions: Please read the following statements and for each, choose the number that best represents your co-workers. The rating scale is as follows:*

| Strongly Disagree | Disagree | Undecided | Agree | Strongly Agree |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| My coworkers assist me with heavy workloads. | O | O | O | O | O |
| My coworkers go out of their way to help me with work-related problems | O | O | O | O | O |
| My coworkers help me out when things get demanding | O | O | O | O | O |
| My coworkers help me when I'm running behind my work. | O | O | O | O | O |
| My coworkers help me with difficult assignments, even when I don't directly request assistance. | O | O | O | O | O |
| My coworkers show me where things are that I need to do my job. | O | O | O | O | O |
| My coworkers compliment me when I succeed at work. | O | O | O | O | O |
| My coworkers listen to me when I have to get something off my chest. | O | O | O | O | O |
| My coworkers make an effort to make me feel welcome in the work group. | O | O | O | O | O |
| My coworkers make an extra effort to understand my problems and concerns. | O | O | O | O | O |
| My coworkers show concern and courtesy toward me, even when things are difficult. | O | O | O | O | O |

11/9/22, 8:07 PM                                    Qualtrics Survey Software

|                                                      | 1 | 2 | 3 | 4 | 5 |
|------------------------------------------------------|---|---|---|---|---|
| My coworkers take a personal interest in me.         | O | O | O | O | O |
| My coworkers take time to listen to my concerns.     | O | O | O | O | O |
| My coworkers try to cheer me up when I'm having a bad day. | O | O | O | O | O |

**PART C** *Instructions: Please read the following statements and for each, choose the number that best represents your **working environment during internship**. The rating scale is as follows:*

| Not characteristic at all |   |   |   | Highly characteristic |
|---------------------------|---|---|---|-----------------------|
| 1                         | 2 | 3 | 4 | 5                     |

|                                                            | 1 | 2 | 3 | 4 | 5 |
|------------------------------------------------------------|---|---|---|---|---|
| Fosters creativity.                                        | O | O | O | O | O |
| Fosters creative atmosphere.                               | O | O | O | O | O |
| Cares to make the tasks and jobs more interesting and attractive. | O | O | O | O | O |
| Fosters imagination and new ideas.                         | O | O | O | O | O |
| Finds good solutions for new problems.                     | O | O | O | O | O |
| Copes successfully with challenges and changes.            | O | O | O | O | O |
| Rewards creative achievements.                             | O | O | O | O | O |
| Offers many new products of high quality.                  | O | O | O | O | O |
| Fosters and rewards creative teamwork.                     | O | O | O | O | O |

11/9/22, 8:07 PM                                          Qualtrics Survey Software

|  | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Performs many new approaches in production and marketing. | ○ | ○ | ○ | ○ | ○ |
| Is known for creative improvements. | ○ | ○ | ○ | ○ | ○ |
| Cares for customers in efficient and creative ways. | ○ | ○ | ○ | ○ | ○ |
| Fosters finding new ways of doing things. | ○ | ○ | ○ | ○ | ○ |
| Stimulates employees to think and reflect over tasks and performance. | ○ | ○ | ○ | ○ | ○ |
| Rewards innovations. | ○ | ○ | ○ | ○ | ○ |
| Successfully handles complex problems. | ○ | ○ | ○ | ○ | ○ |
| Cares for employees who are more complex and thoughtful than others. | ○ | ○ | ○ | ○ | ○ |
| Provides many cultural activities. | ○ | ○ | ○ | ○ | ○ |
| Avoids work that is too routine and tedious. | ○ | ○ | ○ | ○ | ○ |
| Provides positive thinking about creativity in management and executives. | ○ | ○ | ○ | ○ | ○ |

**PART E**

Please fill in your personal details or circle **ONE** option.

a.) Age :

|  |
|---|
|  |

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b.) Gender :

○ 1. Male

○ 2. Female

○ [                    ] 3. Others (specify)

c.) Ethnicity :

○ 1. Malay

○ 2. Chinese

○ 3. Indian

○ [                    ] 4. Others ( specify )

d.) Educational level :

○ 1. Full-time Undergraduate Student

○ 2. Part-time Undergraduate Student

○ [                    ] 3. Non Undergraduate Student (specify)

e.) Current Institution (e.g. UTAR) :

[                                        ]

f.) Course of Study (e.g. Psychology) :

[                                        ]

g.) Year of Study (e.g. Year 3) :

[                                                                    ]

h.)  Have you completed your internship program? :

○  1. Yes

○  2. Not yet.

○  [                        ] 3. Currently in internship.

i.)  How long is your internship duration? :

○  1. 3-4 months

○  2. Less than 3 months

○  [                        ] 3. More than 4 months

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**Appendix D**

**Ethical Approval Letter**