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Role of Career Exploration in Influencing Career Choice among Pre-University Student

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ABSTRACT

In the age of innovation, digitalization, and globalization today, deciding to take a career path has been growing and challenging. The career path continues to increase its stature as a career choice, pursued by many in an evolving, unpredictable, and competitive marketplace. Students' general career selection process is the first step to ensuring that human resources align with the labor market demands. This study aimed to determine the role of career exploration as a mediator in the relationship between social support and career self-efficacy on career choices among pre-university students. This research is a quantitative and correlational study conducted on students in the Agricultural Science of Foundation program at Universiti Putra Malaysia. By using simple random sampling, 249 students were selected based on Cohen's calculation. The researchers used the Career Exploration Survey (CES), Multidimensional Scale of Perceived Social Support, Career Decision-Making Self-Efficacy Scale-Short (CDSE-SF), and career choice instrument surveys to measure the variables in this study. The results show that career exploration acts as a partial mediator in the relationship between social support and career self-efficacy on career choice. There is not only a significant relationship between the career exploration and the career choice, but also some direct relationship between the social support, career self-efficacy and career choice. This study provides a basis for reference to academicians and instructors designing the pre-university student curriculum in choosing a career. Teachers are also recommended to play an

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active role in initiating career exploration activities for students during their learning process.

Keywords: Career choice, career exploration, career self-efficacy, mediator, social support

INTRODUCTION

Industrial Revolution 4.0 (IR4.0) has shifted the world from computing technology to the Internet of Things, Internet Services, Robotics, Big Data, Cloud Manufacturing, Cyber-Physical Systems, Virtual Reality, and Augmented Reality. Combining all these developments will produce a new and smarter system for the community (Pereira & Romero, 2017). According to Hirschi (2018), digitalization and automation may be among the most important issues that form a new career choice pattern, career development, and career counseling in the future. The emergence of the IR4.0 and its consequences has reshaped a career pattern for the future labor market. Thus, investment in human resources and career pathways is a priority in leveraging this growing economic opportunity (World Bank, 2020).

Career development and planning are very much related to the current age of IR4.0. The emergence of technology and smart system bring about changes, innovations, and novelty to the world. These digital changes require teaching, learning, and training processes that match this era (Albay & Serbes, 2017). Within this context, career education is essential at the very beginning of an educational journey for individuals.

Students' general career selection process is the first step to ensure that human resources are in line with the labor market demands where the process, on average, takes place between the age of 15 and 17. The career exploration process continues through up to the age of 24 (Yusop, 2002). Career selection is a framework for which an individual will work in the future (Humayon et al., 2018). Therefore, the correct and appropriate career choice of students is highly sought after to avoid unwanted issues as it can be a predictor and determiner of income prospect levels, conditions, or career environment, which ultimately change a person's personality, attitude, and outlook on a career (Kazi & Akhlaq, 2017).

However, Quadri (2018) stated that most youths were unaware that various career opportunities existed due to the lack of information about such job opportunities. This lack of information has made the career selection process difficult because most students, according to Kunnen (2013), are more likely to choose a career based on their interests. The statement that supports this notion is that good career planning leads to achievements in life. However, the dimension of cultural values adopted is contrary to one's interest in choosing a career (Akosah-Twumasi et al., 2018).

An individual will have a better career selection if he has relevant career information and guidance (Nyamwange, 2016). Nyamwange also stated that most students with little knowledge of various fields made their choices confined to their perceptions of ideal jobs and subjects

studied in the lower secondary school. Thus, it is essential to investigate the mediating role of career exploration in determining the model of career choices based on social support and career self-efficacy predictors (Ooi et al., 2018).

Importance of Career Education for Pre-University Students

Technical and Vocational Education Training (TVET) is an educational and training process that involves technology and science, mastery of hands-on skills and attitudes, as well as knowledge and understanding related to employment in various sectors and daily life (United Nations Educational, Scientific and Cultural Organization, 2002). TVET produces skilled and semi-skilled labour to meet the labour market needs. TVET is an essential branch of general education in developing human capital to nurture Malaysia into a high-income and developed country. TVET is overgrowing in Malaysia and has become Malaysia's education system's backbone towards a developed nation (Ibrahim et al., 2015; Z. Omar et al., 2011).

TVET is one of the pathways of career education because it aims to produce individuals with high skills and understanding in a particular field of work (Atchoarena & Delluc, 2002). The goal of TVET is to match the career education objectives defined by Guichard (2001). TVET plays a pivotal role in developing the country's human resources by producing skilled labor, promoting industrial productivity, and improving individuals' quality of life (Arshad et al., 2018). It also has direct involvement with industries that are ready to accept TVET graduates for employment. A review of the School to Work Transition by Khazanah Research Institute (2018) stated that most youths acknowledged TVET as one of the best qualifying employment platforms. Abiddin et al. (2009) similarly reported on the incredible possibilities of TVET graduates pursuing higher education and equipping themselves with the skills needed before entering the more challenging world of work.

Besides, to produce a skilled workforce in a particular field, career education also helps students equipping themselves with marketability and soft skills. According to Bakar (2011), TVET helps students acquire the skills, knowledge, and attitudes needed in professional development in the working world and the need for good citizenship as well as lifelong learning. However, Arshad et al. (2018), as well as Puad and Desa (2020), found the limitation among TVET students on their employability skills, such as communication, problem-solving, and other related skills.

As described by Guichard (2001), career education is a comprehensive effort in the education system and community to help individuals recognize a work-oriented society's values and incorporate them into their lives. Guichard explained the different objectives of career education and career counseling. According to him, career counseling aims to enable an individual to deal with issues related to themselves. The service helps them build on their

aspirations, find ways to lead to solutions, and pursue whatever careers they deem fit. In contrast, career education aims to enable an individual to develop a complete framework for transitioning from school to career and personal change transitions.

For students in secondary and tertiary education, exposure to career education is crucial for them to be engaged in and motivated about their careers. They may realize their potentials, skills, and capabilities in certain areas and tasks at this age. They also have a clear understanding of themselves and make decisions on their subject choices and career pathways. They can think about how they might live and work when they leave school. Thus, high-quality career education and guidance are essential parts of schooling in preparing students for their future. The decisions that they make at school have a significant impact on their future lives. Their choices affect their further education, training, employment, social experiences, finances, and health outcomes (Career Industry Council of Australia, 2020; Kamaliah et al., 2018). Supporting teenagers in deciding on their subjects and pathways can assist them to have a more optimistic outlook on their lives. Simultaneously, they will gain a sense of purpose and a greater level of contribution to their families and societies to make them better citizens of the country.

Furthermore, there are economic and social benefits whenever students are assisted in making guided transitions from secondary school to further education, training, or employment. Students will be more focused to their jobs, gained higher wages, and better prepared for future challenges (Hooley & Dodd, 2015). Moreover, successful transitions support individuals to enhance their capacities in ways that contribute to enhanced jobs, skills and growth. Career education and counseling play an essential role in a curriculum that promotes students' interests, strengths, aspirations, and achievements (Cho, 2017). Moreover, secondary and higher education curriculum needs to be upgraded and aligned with current industry trends, thus exposing students to their future careers. With the right and well-informed knowledge and career education, students can prepare and decide about their subject choices and career pathways (Khalid, 2016).

Besides, the right career education setting in students' lives leads to greater heights in happiness and success. Students will enjoy their future careers because they fit and match their interests. They will feel happy in whatever they do and will also be satisfied with their workplace contribution. Careers help them enhance their existing skills and gain a new set of skills, which will contribute to their future credibility profile. According to Indianti and Aninditha (2019), the best-match job with one's interest will satisfy and fulfill the individual's work satisfaction.

Factors and Influence of Career Choice

Social Cognitive Career Theory (SCCT), introduced by Albert Bandura in 1986, was adopted as the theoretical framework for this study. This theory was subsequently refined

and developed by Lent et al. (1994). SCCT essentially emphasizes the development and explanation of career-related interests, academic, career choices, and education and career achievements (Figure 1). Bandura (1989) stated that SCCT was the interaction between career choice and career self-efficacy, outcome expectation, goals determination, choice decision, outcomes, and other factors, such as academic achievement and socioeconomic.

Career choice is a complicated process and has a lasting impact on an individual's life. Making a career choice is challenging and involves many interrelated factors (Kazi & Akhlaq, 2017). According to Ahmed et al. (2017), a person's career choices are influenced by two factors; social and psychological factors. Social factors can involve an individual's relationship, such as parents, family, history, and environmental characteristics. The latter are individual perceptions, beliefs, ideas, and personalities. Due to the complexity of the career choice process, an individual tends to make career decisions based on several factors dominating their lives, such as socioeconomic, educational, cultural background, and family influence (Mohd Rasdi & Ahrari, 2020). Students are also influenced by media, peers, health barriers, income position and financial problems, income prospects, job opportunities, social acceptance of a profession, recognition, and job satisfaction (Kazi & Akhlaq, 2017).

According to Borg et al. (2014) and Fizer (2013), many factors affect career choices among university students. From multiple career development theories, influencing career choice aspects include childhood fantasy, culture, personality, previous experience, gender, interest, life role, skill, ability, talent, social and economic condition. For childhood fantasies, memories, and questions from one's childhood may help shape how one thinks about careers and future life. Based on the career development theories, these fantasies about careers are relevant and occur until the age of 14 (Rashid et al., 2009). For culture, the influence of racial and ethnic background may impact individuals' career choices.

Similarly, community, family, and residential areas may also shape individuals' values and expectations in deciding a job for their future (M. K., Omar et al., 2018). Moreover, personality is one of the most critical factors in influencing career choices. By utilizing personality, individuals may benefit in selecting a career field that is a good fit for personality make-up, increasing awareness of learning style of career education, managing job tasks in the workplace, and providing assistance in job search, in terms of marketing and evaluating opportunities.

For previous experience, having positive experiences and role models working in specific careers may influence career choices. As human beings, people are likely to consider continuing a particular task if we have a positive experience doing it. For gender, both men and women are victims of career-related stereotypes today. Research on gender and career choice is ongoing as

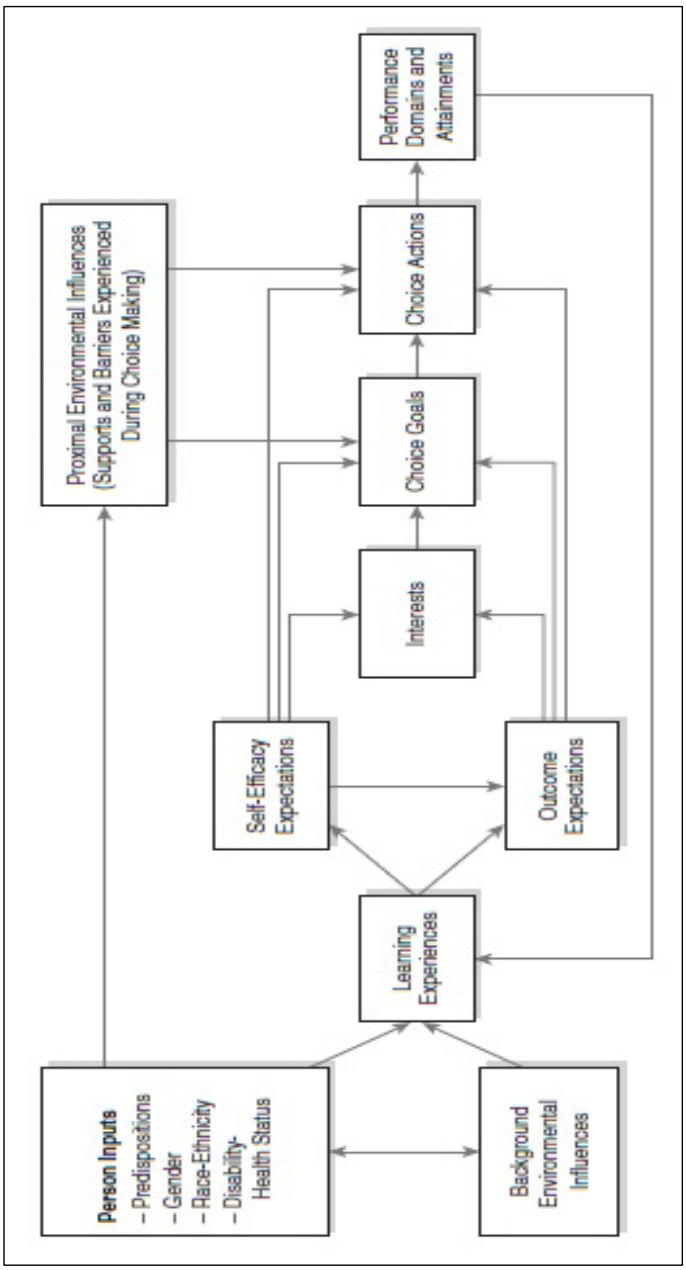

Figure 1. Social cognitive career theory (Adapted from: Lent et al. (1994))

men and women's roles in the workforce evolve (Puad & Desa, 2020). For interest, there are many valid instruments available to connect personality types and career fields. The instrument matches personality characteristics and personal preferences to job characteristics.

As for life roles, an individual always plays multiple roles in his or her life. The responsibility in holding multiple positions may influence how individuals look at careers in general. For skills, abilities, and talents, these elements are central to the earliest career development fields. These factors help researchers create occupation profiles for specific jobs, identify individual differences, and match individuals to occupations. For social and economic conditions, events that take place in our lives may affect career choices available. This factor also includes changes in the economy, and the job market may also affect how our careers develop (Borg, 1996).

According to SCCT, career self-efficacy interacts with career choices by developing an interest that drives a person to set career goals, which then triggers the chosen career's action choices. Career self-efficacy is essential for career development, internally or externally (Lent et al., 1994). According to Betz et al. (1996), career self-efficacy is the expectation of self-efficacy related to the behaviors required in career choices and adjustment.

In the SCCT, social influence is a primary driving force for an individual's sense of self-efficacy and career choice, even for those who have already developed this aspect of cognition. Based on the theory of SCCT, Lent et al. (2006) posited that social support might have a more significant influence on career choices than any other factors, such as career self-efficacy. Scholars share this notion (e.g., Wright et al., 2014). This area who evaluated social supports impacts career self-efficacy by integrating the attachment theory to students' career aspirations. Social support also involves both the perception of a sufficient number of supportive persons and the level of satisfaction with individuals.

Meanwhile, career exploration improves students' knowledge of their career options, encouraging them to develop and work toward their goals when they are also beginning to venture beyond the orbit of their parents. The process of career exploration involves many branches, such as learning more about ourselves, researching available career options, trying out new experiences, and creating a strategic plan to reach individual professional goals. Xu et al. (2014) postulated that career exploration could predict career choice. The study of Gushue et al. (2006) found that career exploration involvement could determine career decisions and self-efficacy. Career exploration plays a role in making career decisions to gather information and improve self-understanding and career.

Career exploration also has its contributors, such as socioeconomic and personality factors. These are some of the factors that affect students' career exploration (Cho, 2017; Khalid, 2016). The influence of a reputable career in the

job market has placed significantly greater importance on financial, job-related, and perceived benefit-cost ratio factors for students. They are attracted to the offers and benefits from the position and influenced their career exploration and career aspiration. Moreover, personality factors, such as ambivalence, are significant in a career selection and are potential elements in directing individuals' career exploration. Youths with a strong personality are more likely to do career exploration, enabling them to make a decision early and are driven by their abilities to influence.

The concept of career counseling and career exploration is crucial in preparing youth for the nation. Students' and youths' engagement in career exploration will help them gather information about themselves and the environment to nurture progress and career development. Career exploration may also be a factor to trigger curiosity and a natural desire to explore among students. It is crucial to know about different careers from the early stage of their study or even better in the early years of schooling (Cho, 2017). Pre-university students should make decisions critically regarding their future careers and strategies to achieve their goals.

Based on the SCCT, a research framework for this study was developed, as shown in Figure 2. The framework describes the influence of the independent variables on the mediator and dependent variables. Career self-efficacy and social support were the independent variables in this study, while career exploration was a mediator. The dependent variable in this study was the career choice.

A mediator is a process where one variable is the cause of another variable (MacKinnon et al., 2012). Mediators usually act as the third variables required to make certain independent variables useful for dependent variables (criterion). This relationship is called an indirect relationship. According to MacKinnon et al. (2011), the mediator variables minimize independent variables' effect on the dependent variables. The mediators affect the direction and strength of the relationship between the two variables (MacKinnon et al., 2011).

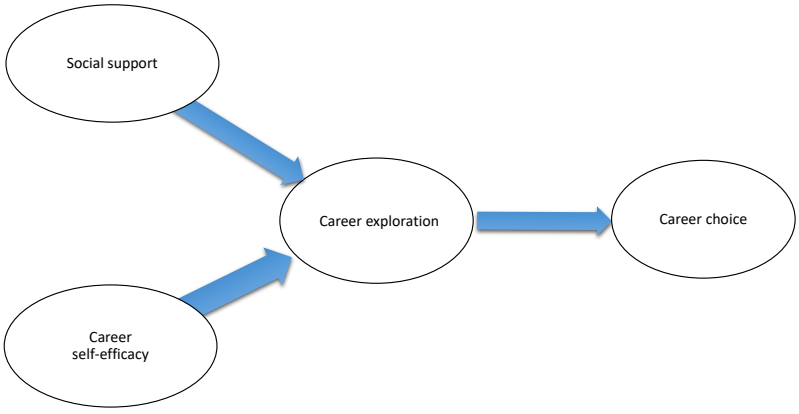

Figure 2. Research framework

Many studies run mediation-based research across various fields, including psychology, medicine, and business. Mediation-based studies are evolving as these methods focus on what is often the central scientific hypothesis. Studies using mediators in the context of careers have also been conducted extensively, such as the study of Ismail et al. (2013).

Career exploration is a mediator variable that inter-relates social support, career self-efficacy, and career choice. In a study to predict intrinsic career success, D. J., Brown et al. (2006) conclude that goals-based activities serve as mediator variables. Previous studies also show that career exploration has a significant positive relationship with career self-efficacy, social support, and career choice (Chan, 2020). High levels of self-efficacy act as a motivation for an individual to do more job searching (career exploration) and, in return, will lead to positive results (Van Ryn & Vinokur, 1992). Manasseh (2015) found that self-efficacy had no direct effect on performance and contended that other factors were involved in this relationship. According to C., Brown et al. (1999), the act of passive involvement in job-related activities will lead to difficulty in the career decision-making process, which in return, will hinder positive decision-making and experience a developmental outcome.

Moreover, Aftab and Malik (2017) studied the significant career dimensions exploration, namely the process of exploration, exploratory confidence, and exploratory reactions as mediators in the relationship between career perceptions and career decisions. The results showed that exploratory confidence dimensions partially mediated the relationship between career decisions and career perceptions. They also found that exploratory confidence was also a partial mediator in the relationship between career decision and career certainty. Park et al. (2017) examined the relationship between the nature of anxiety and career anxiety. It was found that the relationship between the two was negative without the presence of career exploration. However, the relationship turned positive with the presence of career exploration. These findings suggest that career exploration serves as a full mediator for the relationship between anxiety and career anxiety. Talib et al. (2017) utilized a quasi-experimental research method to determine the effects of career exploration modules on career planning, career self-efficacy, and career maturity among community college students. The study results disclosed that the ability to plan a career improved after going through the career exploration module. This module has also increased the self-efficacy of students in their careers.

Foundation Program in Universiti Putra Malaysia

The Foundation of Agricultural Science program in Universiti Putra Malaysia aims to increase students' involvement and enrollment in agriculture-related bachelor degree programs. This one-year program comprises two semesters. Each semester consists of 18 weeks of learning,

with six subjects per semester. It exposes pre-university students to meaningful experience in the agricultural field as a niche area and other subjects required for most bachelor degree programs at Universiti Putra Malaysia. The subjects include Mathematics, Biology, Chemistry, Physics, Agriculture, and the English language. Figure 3 shows the curriculum and career paths of students in the foundation program.

During the foundation program, students will develop their cognition in careers for their life. The extent to which each of the foundation programs influences career choice decisions varies from one population to another depending on the situation and environment. Usually, before making career choices, students are often provided with a list of careers. They make choices based on their previous experiences and knowledge. However, most students lack adequate information regarding various available careers in the job market. Hence, their choices are surrounded by their perception of the ideal job and the subjects they study in secondary school. Perhaps, the only support students get in the school system is from career counselors expected to assist students with their career choice (Pei-Boon et al., 2020).

Therefore, this study aimed to investigate the mediating role of career exploration in determining the model of career choices based on social support and career self-efficacy predictors among pre-university students at Universiti Putra Malaysia. The study sought to answer two research questions; 1) Do career self-efficacy and social support have a significant relationship with career choice? 2) Does career exploration play a vital role in mediating the model of career choice based on social support and career self-efficacy predictors?

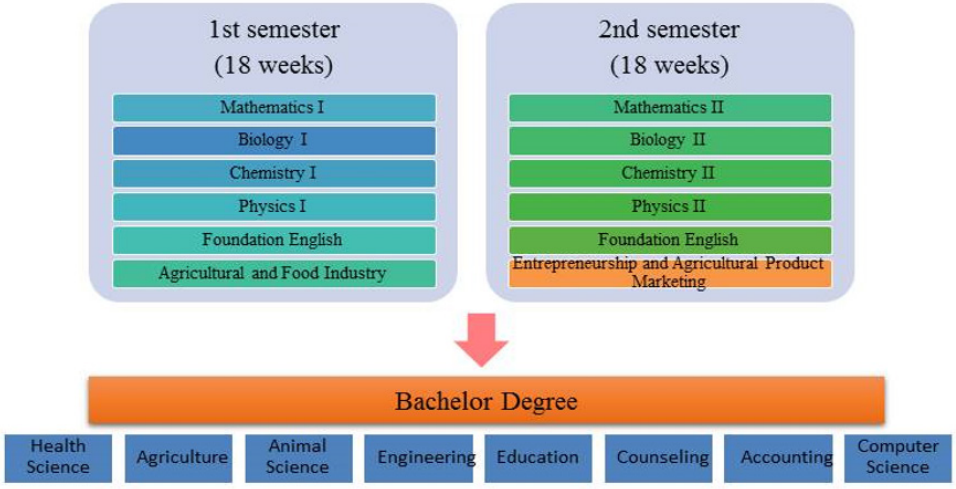

Figure 3. Curriculum and career paths of foundation of agricultural science program

METHODOLOGY

The study employed a quantitative approach and a correlational research design. The 249 respondents were selected using Cohen's calculation with a simple random sampling method from 846 students enrolled in the Foundation of the Agricultural Science program at Universiti Putra Malaysia cohort 2019/2020.

The researchers used four instruments to measure four variables; social support, career self-efficacy, career exploration, and career choice. Adapted instruments from Zimet et al. (1988) for the Multidimensional Scale of Perceived Social Support, Betz et al. (1996) for Career Decision-Making Self-Efficacy Scale-Short (CDSE-SF), Stumpf et al. (1982) for the Career Exploration Survey (CES) and Alkhelil (2016) for Career Choices Inventory were used in the current study. The dimensions of social support, career self-efficacy, career exploration, and career choice were measured in the questionnaire. The dimensions of the variables are listed in Table 1.

The permission to use and adapt the instruments was obtained from the respective authors. Three lecturers with expertise in the Technical and Vocational Education and Training area validated the instruments before administering them. The pilot study had been conducted by involving 40 respondents from the first-year students from different group in the Foundation of the Agricultural Science program at Universiti

Table 1

The dimension of variables measured in the questionnaire

Variable	Dimension
Social Support	Perceived social support
Career Self-Efficacy	Self-evaluation
	Job information
	objective
	Future planning
	Problem-solving
Career Exploration	Systematic-intended Exploration
	Environment Exploration
	Self Exploration
	Information Satisfaction
	Focus
	Career Exploration Outcome
Career Choice	Management efficiency
	Technical efficiency
	Creativity

Putra Malaysia. The Cronbach Alpha's value for career choice, social support, career self-efficacy, and career exploration instruments were 0.72, 0.83, 0.92, and 0.93, respectively. By referring to previous research of similar nature in the field, the Cronbach Alpha's values for career choice, social support, career self-efficacy, and career exploration instruments are considered acceptable (Alkhelil, 2016; Betz et al., 1996; Stumpf et al., 1982; Zimet et al., 1988). The pilot study had provided evidence that the instruments are reliable to be used in the present study.

The data were collected from the selected respondents by using a questionnaire. Permission to conduct research was obtained from the Ethics Committee of Universiti Putra Malaysia. The questionnaires were distributed by hand to all respondents. The respondents were required to complete the questionnaire within the stipulated time frame and return the questionnaires upon completion. After collecting the data, the authors recorded the questionnaires' responses using IBM SPSS Statistics software for data analysis.

RESULTS AND DISCUSSIONS

The researchers used a Pearson correlation analysis on the independent variables and dependent variables. The correlation values between independent variables, social support, career self-efficacy, and dependent variable, career choice, are shown in Table 2. The relationship between social support and career choice ($r = .28$, $p < .01$) is positive but weak. This result means the social support and career choice was almost not correlated. The relationship between career self-efficacy and career choice ($r=.42$, $p<.01$) was positive, significant, and moderate. This result suggests that career self-efficacy and career choice are moderately correlated. This finding is in line with the study conducted by Mahadi et al. (2016) on the relationship between self-esteem and social support for career decisions. They found that self-esteem was positively associated with career decisions. Their Structural Equation Model (SEM) analysis found an increase in students' self-esteem improves their career decision-making ability. Other studies also support the finding of this study, in which self-efficacy has a significant positive impact on job satisfaction (Yalalova & Zhang, 2017).

The findings of many studies (e.g., Chan, 2020; Humayon et al., 2018) show that both are strongly positive, and social support from families plays a significant

Table 2

The correlation between social support and career self-efficacy with career choice

Variables	r	p	Direction	Relationship
Social Support– Career Choice	0.28	0.001*	Positive	Weak
Career Self-Efficacy – Career Choice	0.42	0.001*	Positive	Moderate

*significant at alpha 0.05

role in influencing students in choosing a career. However, the findings of this study are not in alignment with the findings of other studies. Humayon et al. (2018) concluded that a healthy family influence produced the best career choice. Chan (2020) found that parenting style was positively associated with difficulty in making career choices. He emphasized that parents had a strong influence on their children's career decisions. Hsiao and Nova (2016) also found that family factors did not contribute to the career selection process among high school students attending the USP 6th Career Carnival.

Table 3 shows that the direct model that links social support and career choice is significant ($\beta = 0.282$, $p < 0.05$). Based on the criteria outlined by Shrout and Bolger (2002) as well as Samah (2016), it is reasonable to conclude that the dimension of career exploration is a partial mediator in the relationship between social support and career choice. The dimension of systematic-intended exploration (SIE) is the most influential mediating dimensions in this relationship at $\beta = 0.197$, $p < .005$. For the other dimensions, β values ranges from $\beta = 0.253$, $p < .005$ to $\beta = 0.288$, $p < .05$.

Table 3

Mediator effects between social support and career choice

Factors / Models / Paths of Hypothesis		β	p-value
Direct Model	Social Support → Career Choice	0.282	0.001*
Mediator Model Systematic-intended Exploration	Social Support → Career Choice	0.197	0.001*
	Social Support → Systematic-Intended Exploration	0.164	0.007*
	Systematic-Intended Exploration → Career Choice	0.238	0.000*
Mediator Model Environment Exploration	Social Support→ Career Choices	0.253	0.000*
	Social Support→ Environment Exploration	0.201	0.001*
	Environment Exploration → Career Choice	0.299	0.000*
Mediator Model Self-Exploration	Social Support→ Career Choices	0.258	0.000*
	Social Support→ Self-Exploration	0.150	0.014*
	Self-Exploration → Career Choice	0.295	0.000*
Mediator Model Information Satisfaction	Social Support→ Career Choice	0.274	0.000*
	Social Support→ Information Satisfaction	0.146	0.017*
	Information Satisfaction → Career Choice	0.309	0.000*
Mediator Model Focus	Social Support→ Career Choice	0.255	0.000*
	Social Support→ Focus	0.163	0.007*
	Focus → Career Choice	0.294	0.000*

Table 3 *(Continued)*

Factors / Models / Paths of Hypothesis β		β	p-value
Mediator Model Career Certainty Exploration Outcome	Social Support→ Career Choice	0.288	0.000*
	Social Support→ Career Certainty Exploration Outcome	0.318	0.000*
	Career Certainty Exploration Outcome → Career Choice	0.349	0.000*

*significant at alpha 0.05

The study's overall finding shows that social support requires other factors for this variable to associate with career choice. Therefore, it can be concluded that the dimensions of systematic-intended exploration, environment exploration, self-exploration, information satisfaction, focus, and career exploration outcome are the necessary mediators between social support and career choice. The visual correlation between social support and its dimension to career choice is illustrated in Figure 4.

Table 4 shows the mediating effects of career exploration dimensions on the relationship between career self-efficacy and career choice. Based on the direct model, career self-efficacy is positively related to career choice ($\beta = 0.425$, $p < 0.05$). Based on the results of multiple regression tests conducted on this relationship to see the effect of mediation effect, the result shows that all career exploration dimensions have mediation effects on the relationship except systematic-intended exploration. This study found that systematic-intended exploration in the relationship had caused the relationship between systematic-intended exploration and career choice to be insignificant. Therefore, systematic-intended exploration can be claimed to not function as a mediator in this relationship.

For the other dimensions of career exploration, environment exploration, self-exploration, information satisfaction, focus, and career certainty exploration outcome play partial mediators. A career exploration dimension in the relationship between career self-efficacy and career choice does not diminish the relationship's strength but somewhat weakens the relationship between them. Based on Table 4, the dimensions of environment exploration have the most substantial mediation effect ($\beta = 0.125$, $p < 0.048$) in comparison to the others. The mediator of environment exploration almost eliminates the relationship between career self-efficacy and career choice (Figure 5). Other dimensions also influence the relationship where the coefficient of correlation between career self-efficacy and career choice ranged from $\beta = 0.146$, $p < 0.005$ to $\beta = 0.180$, $p < 0.005$.

This finding indicates that the dimension of career exploration plays a role as a mediator in the relationship between career self-efficacy and career choice. Therefore,

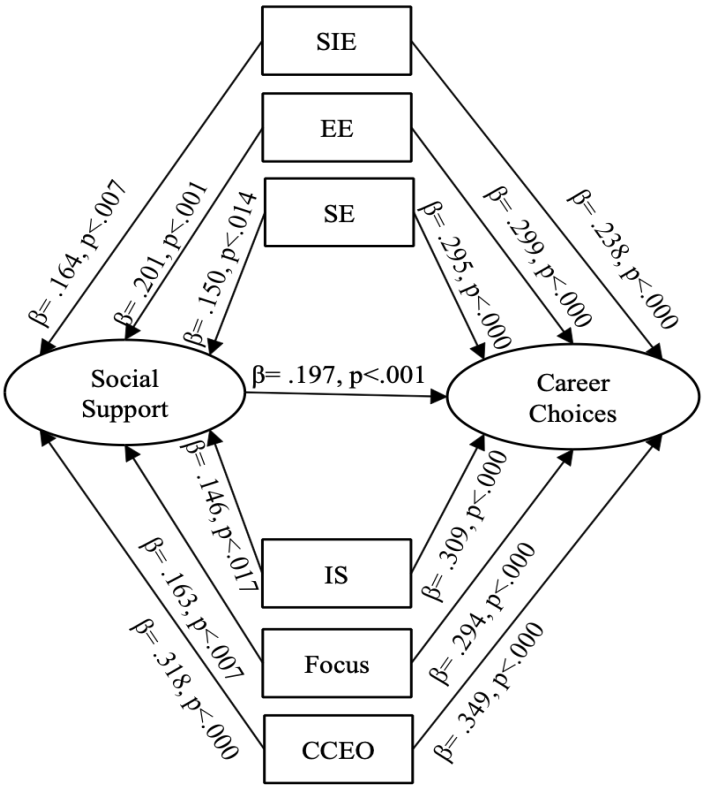

Figure 4. Values of the mediator, β, (career exploration dimension) in the relationship between social support and career choices

Table 4

Mediator effects between career self-efficacy and career choice

Factors / Models / Paths of Hypothesis β		β	p
Direct Model	Career Self-Efficacy → Career Choice	0.425	0.000*
Mediator Model Systematic-intended Exploration	Career Self-efficacy → Career Choice	0.087	0.147
	Career Self-efficacy → Systematic-Intended Exploration	0.385	0.000*
	Systematic-Intended Exploration Career Choice	0.238	0.000*
Mediator Model Environment Exploration	Career Self-efficacy → Career Choice	0.125	0.048*
	Career Self-efficacy → Environment Exploration	0.478	0.000*
	Environment Exploration→ Career Choice	0.299	0.000*

Table 4 *(Continued)*

Factors / Models / Paths of Hypothesis β		β	p
Mediator Model Self-Exploration	Career Self-efficacy → Career Choice	0.157	0.009*
	Career Self-efficacy → Self Exploration	0.378	0.000*
	Self Exploration → Career Choice	0.295	0.000*
Mediator Model Information Satisfaction	Career Self-efficacy → Career Choice	0.146	0.018*
	Career Self-efficacy → Information Satisfaction	0.455	0.000*
	Information Satisfaction → Career Choice	0.309	0.000*
Mediator Model Focus	Career Self-efficacy → Career Choice	0.151	0.012*
	Career Self-efficacy → Focus	0.393	0.000*
	Focus → Career Choice	0.294	0.000*
Mediator Model Career Certainty Exploration Outcome	Career Self-efficacy → Career Choice	0.180	0.005*
	Career Self-efficacy → Career Certainty Exploration Outcome	0.506	0.000*
	Career Certainty Exploration Outcome → Career Choice	0.349	0.000*

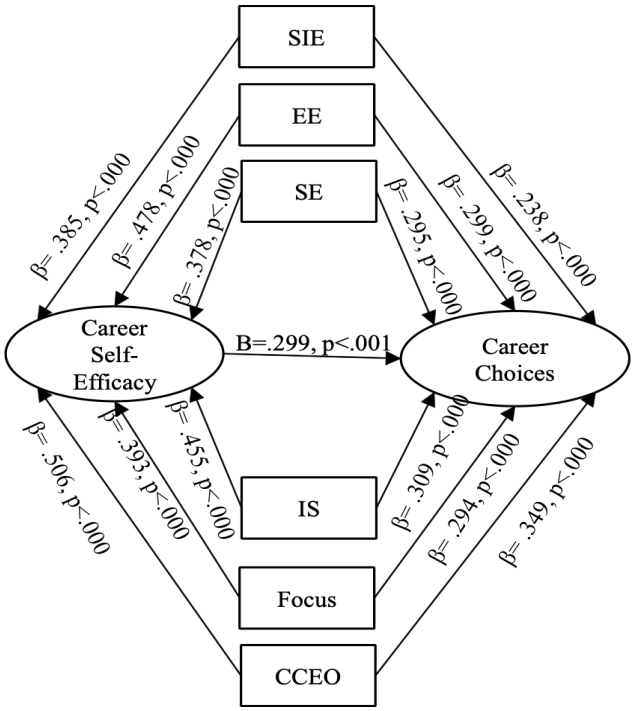

Figure 5. Values of the mediator, β, (dimensions of Career Exploration) in the relationship between career self-efficacy and career choice

career self-efficacy requires the factors of career exploration, environment exploration, self-exploration, information satisfaction, focus, and career certainty exploration outcome to affect career choices (Figure 6). The absence of these factors further weakens the relationship between the two ($\beta = 0.425$, $p < 0.005$).

Based on the data analysis results, all dimensions of career exploration, systematic-intended exploration, environment exploration, self-exploration, information satisfaction, focus, and career certainty exploration outcome have a mediating effect on the relationship between social support and career choice. For the relationship between career self-efficacy and career choice, all dimensions are partial mediators in this relationship except for SIE that does not affect the relationship between the two variables. The results indicate that career exploration is a partial mediator for social support and career choice. This relationship requires other factors to establish a relationship between them. Therefore, one of the other factors is career exploration.

These findings are supported by several studies, such as Ismail et al. (2013) and Park et al. (2017). Ismail et al. (2013) studied proactive behavior as a mediating variable in the relationship between career management and career satisfaction. Their findings indicated that aggressive action acted as an essential mediator variable for career management and career satisfaction. Meanwhile, a study conducted by Park et al. (2017) explored career exploration as a mediator in the relationship between anxiety and career indecision. They found that career exploration played a mediator role in this relationship where lack of career exploration behaviors due to a low level of anxiety caused difficulties in career decision making. In contrast, high anxiety causes an individual to have career

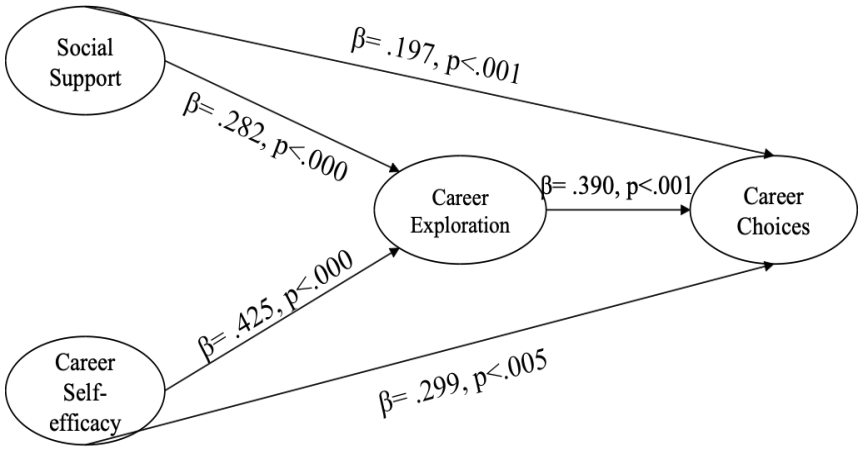

Figure 6. The value of β for mediator model of career exploration in the relationship between social support and career self-efficacy

exploration behaviors, thus reducing career indecisiveness.

Hermawan and Farozin (2018) stated that the level of individual career exploration had been the framework of how an individual could determine career or vocational choices. Based on the study conducted by Xu et al. (2014), they conclude from their findings that career exploration is a predictor of career. Not only that, but career exploration also has a direct relationship with social support and career self-efficacy. According to the study by Turan et al. (2014), the results of multiple correlations and regression tests confirm that social support has a significant relationship with career exploration. Social support is essential to understand career exploration better. Based on the study conducted by Guan et al. (2015), they found that parental support affected career exploration. Thus, they considered that it was essential to have parental support to ensure a continuous career exploration process. A study conducted by Tadele and Terefe (2016) found that career self-efficacy influenced career exploration. Study by Van Ryn and Vinokur (1992) also found that career self-efficacy was significantly associated with career exploration. These studies are convincing enough to show that career exploration plays a role as a mediator in the relationships between other factors and career choices.

IMPLICATIONS

This study's findings are based on the data collected in 2019, long before the Covid-19 pandemic started and spread worldwide. Therefore, the study on the role of career exploration as a partial moderator in influencing career choice among pre-university students did not take the Covid-19 pandemic situation into account. The findings could be different or could have been the same if conducted nowadays since it depends on the situation of Covid-19 at the location of the study. Should there be any unexpected finding, such a finding should be assumed due to the unstable economic crisis and the affected world of work today. Other considerations, risks, and factors can also influence the elements for career exploration and career choice today.

CONCLUSIONS

Career exploration plays a mediating role in the relationship between social support, career self-efficacy, and career choice. This finding indicates that the relationship between social support and career self-efficacy and career choice requires assistance or other influences to enhance the relationship's strength. Career exploration must be presented in the relationship to ensure social support and career self-efficacy on career choice. Teachers and administrators are recommended to play an active role in initiating career exploration activities for students during their learning process. Career exhibition, career talk, job-shadowing, visitation, and other career-related activities are beneficial to spark interest among pre-university students. Based on the overall findings, this study has the advantage of contributing the

research findings to future studies on career exploration as an intermediary variable and career-related fields. This study provides a basis and serves as a reference to academicians and instructors designing the curriculum and instructions for pre-university students in choosing a career.

Living in the innovative, digital, and global world today, social support and career self-efficacy are essential factors in deciding students' career paths. These two factors have influenced students' career choice directly and indirectly. Simultaneously, the career exploration of students during their study years also impacts students' career choices. The career exploration factor contributes to the students' choice while making the first step to ensuring that their interests align with the job demands. Even small-scale relevant activities and inspired exposures to the world of work can guide students to choose their careers.

Another limitation, the current study only focuses on career exploration dimensions as a mediator variable. Therefore, future studies should examine the dimensions of independent variables (social support and career self-efficacy) in-depth. A few career self-efficacy and social support dimensions could be looked into as potential mediators by future researchers. Other variables listed in the theoretical framework could also be the best possible mediators in choosing a career among pre-university students.

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