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Influence Of Self-Efficacy On Career Exploration Behaviours Among Malaysian Young Adolescent

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INFLUENCE OF SELF-EFFICACY ON CAREER EXPLORATION BEHAVIORS AMONG MALAYSIAN GOVERNMENT SCHOOL YOUNG ADOLESCENTS

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ABSTRACT

Education professionals, including teachers and school counselors, have long been drawn to studies on students' self-efficacy and career exploration behaviors. Career development theories have shown that career exploration begins in the teenage years; however, studies on self-efficacy and career exploration mainly targeted the tertiary education sample group and are rarely found within the Malaysian secondary school student group who are about to enter tertiary institutions. This study set out to investigate the connection between upper secondary students' self-efficacy and career exploration. The difference between school grades and career exploration was also examined. The quantitative-correlational research was carried out using a self-reported survey among secondary students. A stratified random sampling method was employed to obtain 219 respondents. Descriptive analysis was used to investigate high career exploration behaviors among secondary school students. Pearson correlation showed a positive correlation between self-efficacy and career exploration. Meanwhile, linear regression analysis reported that self-efficacy significantly predicted career exploration. Lastly, the ANOVA result showed a significant difference in the career exploration behaviors among all school grades. Among the respondents, Form 4 students had higher career exploration behaviors than Form 3 and Form 5 students. The results of this study indicated that self-efficacy plays a significant role in predicting career exploration; hence, recommendations were made for school counselors to guide students in their career exploration. The implications highlighted the role of higher education institutions in designing more comprehensive career exploration interventions to prepare students at both pre-university and university levels.

Keywords: Career preparation, career attitude, career development theory, Malaysia education blueprint, self-belief, students

1. Introduction

In Malaysia, students in upper secondary schools, specifically referring to those in Form 4 and Form 5, face crucial decisions about their academic and professional futures. The Ministry of Education (MOE) launched the Malaysia Education Blueprint 2013-2025 to enhance the country's education system to meet global standards. One noteworthy initiative introduced under this blueprint was the concept of the Science, Technology, Engineering, and Mathematics (STEM) education (Ng & Adnan, 2018). STEM education emphasizes early career exploration, which requires students to identify their career interests early. However, while facilitating access to career information, the internet's advent introduced variability in the quality of such information. Hence, students may become confused when selecting a career pathway (Harris-Bowlsbey et al., 2002).

In order for students to experience a seamless transition to higher education, equipping students with the necessary skills and resources to make informed decisions about their academic and career pathways is essential. Understanding the landscape of the Malaysian higher education and emphasizing career development components can help students navigate this transition effectively (Bragg, 2007). By shedding light on the challenges and obstacles facing STEM education in Malaysia, the quality and accessibility of STEM education can be enhanced to provide valuable insights for policymakers, educators, and stakeholders in the academic community (Cartigny et al., 2019).

STEM education plays a crucial role in shaping students' career prospects and self-confidence, which significantly impacts Malaysia's educational, employment, and economic advancement. By providing students with essential skills and knowledge, STEM education prepares students to excel in an ever-evolving, technology-driven global workforce. A recent report by the World Economic Forum (2018) emphasized the value of STEM-related abilities across various industries, such as analytical thinking, problem-solving, and digital literacy, which underscore the importance of STEM education in preparing students for future career opportunities. The report highlighted that STEM education is a key driver of innovation and productivity, which is critical for economic growth and competitiveness in the 21st century. As such, STEM education is an imperative strategy for Malaysia's long-term growth and development, and policymakers, educators, and businesses must work together to ensure that students have access to the skills and knowledge they need to succeed in the digital age (Guzey et al., 2014).

STEM education is essential in preparing students for employment opportunities as well as in shaping their future in higher education, particularly in STEM-related fields. The skills acquired through STEM education such as analytical thinking, problem-solving,

and digital literacy are also highly valued in academia as it provides students with a strong foundation for advanced studies and research. Moreover, the interdisciplinary nature of STEM education enables students to have a holistic understanding of complex scientific concepts that help to prepare them to meet the rigorous academic demands of higher education institutions (Martín-Páez et al., 2019).

Junior high school marks a critical period for career preparation and determination, where students begin to contemplate their future academic and professional paths. As adolescents navigate this transitional phase, they face the daunting task of choosing an educational trajectory that is aligned with their career aspirations (Sugiharto & Sunawan, 2019). This juncture is intrinsically linked to career decisions, self-efficacy, and the development of crucial skills for successful career exploration.

During the formative years, junior high school serves as a pivotal period to prepare students for their future academic and professional endeavors, particularly in STEM education. This critical period is characterized by substantial cognitive, social, and emotional growth, which can shape students' interests, abilities, and confidence, ultimately guiding their informed career choices. According to Super's Developmental Theory (1973), junior high school is a crucial juncture where students can begin to explore and solidify their career aspirations, paving the way for future career exploration and decision-making (Kelley & Knowles, 2016).

Self-efficacy is defined by Bandura (2012) as an individual's belief in their ability to successfully accomplish tasks and achieve goals. This concept is of utmost importance in shaping career decision-making as it influences students' confidence in assessing information, setting objectives, and overcoming obstacles (Bandura, 1993; Bandura, 2012). Adolescents who have high levels of self-efficacy actively explore career options and exhibit eagerness and preparedness for various paths (Makki et al., 2015).

Career exploration, defined as activities that aim to increase individuals' understanding of career options, is a fundamental aspect of the developmental process during junior high school (Crites, 1978). Career exploration allows students to gather information, assess their interests and abilities, and make informed decisions about their future career paths (Atkinson & Murrell, 1988). This proactive approach to career exploration equips students with the necessary skills and knowledge to prepare for future challenges, ensuring they are well-equipped to make successful career decisions. However, it is essential to note that existing research on self-efficacy in career development has predominantly focused on university students, which warrants further investigation into its influences on secondary students (Hackett & Betz, 1981).

2. Literature Review
2.1. Conceptual Framework

Super's Developmental Theory was chosen for this study as the target group was adolescents facing the transitional stage in their career development. Super's Developmental Theory, introduced by Super in the 1950s, explains vocational development and delineates various career stages. The theory comprises five stages, with the first stage being the Growth stage, spanning from birth to 14 years old. During this stage, self-concept develops through experiences with family and the school environment, while needs, fantasies, interests, and capacities are explored (Super & Jordaan, 1973). The second stage is the Exploration stage, covering the age range of 15 to 24. In this stage, individuals engage in extensive self-examination and trial-and-error processes to identify suitable and exciting career paths. The third stage is the Establishment stage, where individuals focus on establishing a permanent place (Super & Jordaan, 1973). In this research, the emphasis was on secondary students who were deciding to select their courses to shape their future careers. By age, this falls within the transition stage from Growth to Exploration. This theory was applied in this study to examine the career exploration behaviors as variables.

The Social Cognitive Career Theory (SCCT) emphasizes the importance of actively seeking and gathering information regarding career options, interests, and goals during the career exploration process. Career exploration is primarily influenced by an individual's self-efficacy beliefs. According to Lent et al. (2000), individuals with higher levels of self-efficacy tend to engage in more proactive career exploration behaviors. The SCCT framework suggests that career exploration allows individuals to test their skills and abilities in real-world settings, which helps them refine their self-efficacy beliefs. Positive experiences during exploration also reinforce self-efficacy beliefs and encourage continued participation in career exploration activities. In turn, this can support well-informed decision-making regarding one's career path.

Figure 1 shows the research framework that links the relationship between the examined variables.

Figure 1. Conceptual framework on the influences of self-efficacy on career exploration and the difference between school grades on career exploration

2.2. Career Exploration Behavior

According to Super (1957), career exploration is a continuous process in all stages of career development, with the most intensive exploration occurring during late adolescence and early adulthood. Tiedeman (1961) characterized exploration as a crucial antecedent to crystallization, decision, and implementation. Notably, career exploration emerges as a central activity when the need for decision-making arises (Harren, 1979), which contributes to informed and satisfying decision-making.

Individuals who fail to derive benefits from their exploration tend to disengage from the career decision-making process (Taylor, 1985). Career exploration extends beyond merely providing information and knowledge for career choices (Lent et al., 2016); it actively supports overall career development. As Porfeli and Lee (2012) described, career exploration is a dynamic process through which individuals explore themselves and the external environment.

During adolescence, both personal and external factors significantly impact career exploration. Parents, peers, and mentors can offer valuable insights, advice, and support to help adolescents make informed decisions about their future careers (Kost et al., 2022). Adolescence is a critical period during which positive adults outside the familial context may significantly influence development (Miranda-Chan et al., 2016). Role modelling and mentorship have been shown to play a crucial role in shaping primary care career choices based on extensive research conducted over the past 30 years (Kost et al., 2022). Gender norms and cultural values, for example, can influence the types of careers that adolescents consider (Kayani et al., 2022).

The age of the adolescent is an essential factor in career exploration. Older adolescents have a better understanding of the world, their abilities, and the job market, which can impact their career aspirations and approach to career exploration. Younger adolescents, on the other hand, may be more influenced by societal expectations and pressure from peers and family (Hill et al., 2004; Al-Bahrani et al., 2020; Hoff et al., 2021; Özdemir & AS, 2022; Owusu et al., 2021; Sawitri & Suryadi, 2020). Therefore, the different ages of students' research are reviewed.

Blustein (1992) underscores career exploration as a fundamental process wherein individuals collect information to augment their self and environmental knowledge in pursuing career goals. A range of activities falls under the umbrella of career exploration, encompassing job searching, career planning, fund-seeking opportunities, and contemplating various career options. Any behavior linked to career-related activities that foster career growth is considered as part of the broader scope of career exploration. Therefore, career exploration is a crucial variable for students to acquire. This research thus determined the level of career exploration among students.

2.3.   School Grades and Career Exploration Behavior

According to Super's (1957) developmental theory, the exploration stage spans from 15 to 24 years old, during which individuals engage in increased self-examination and trial-and-error processes. At this stage, individuals actively seek careers that align with their interests (Super & Jordan, 1973). Additionally, Taveira et al. (1998) found that adolescent exploration behaviors tend to increase with age. Their study revealed that 12th-graders exhibit higher levels of self-exploration and environmental exploration compared to 9th-grade students. Consistent with these findings, Roger et al. (2008) conducted a study with 414 Australian high school students and found that higher-grade students expressed a greater desire to engage in exploration activities than their younger counterparts. The authors concluded that students approaching graduation displayed increased curiosity about the working world, leading to heightened involvement in career exploration activities.

The positive relationship between age and career exploration behaviors is supported by Blustein (2011), who found that increased age is associated with improved exploration of work. Similar trends were identified in a Korean study by Na and Jung (2011) involving 250 students majoring in food service and culinary. Higher-grade students reported more active involvement in career exploration than lower-grade students. The authors concluded that older individuals were more likely to engage in career information collection and experiences. This study aimed to identify whether there is a significant difference in career exploration based on school grades. In addition, a recent study conducted in Canada also indicated that as grade levels increase, students in higher grades were more likely to seek career information than their counterparts in lower grades. This trend is attributed to higher-grade students often approaching graduation (Heymann et al., 2021).

However, it is essential to note that some research had suggested no significant differences in career exploration based on age or school grades. Ferrari et al. (2015) observed no age-related increase in career exploration among Italian students, a finding that was further supported by the results of Noack et al.'s (2010) research. Their findings suggest that career exploration remained relatively stable from childhood through adolescence. Consequently, the researchers in this study was motivated to investigate whether a difference in career exploration exists based on school grades.

2.4.   Self-efficacy and Career Exploration

Bandura (1993, 2012) defines self-efficacy as the level of confidence of an individual toward themselves regarding their capabilities to carry out a desired action or given task. Self-efficacy can determine whether an individual will decide to perform or avoid playing out an errand (Bandura, 1982). Through engagement in activities, self-efficacy

increases along with self-knowledge and self-perception. It helps the individual demonstrate more stable emotions and acquire a healthier lifestyle by increasing their coping skills to overcome stress and depression (Taylor & Betz, 1983). Alternatively, self-efficacy is understood as an individual's self-belief or confidence regarding their capabilities (Ahmed, 2011). Individuals with high self-efficacy harbor a strong belief in their ability to tackle tasks and challenges successfully. This positive self-belief fosters positive career attitudes and a well-defined vocational identity. This outcome is attributed to the increased likelihood of engaging in and enjoying career exploration and planning activities (Choi et al., 2012). Such engagement aids in the discovery of personal interests related to the individual's chosen career path and goals (Hou et al., 2014).

In a comparative study of American and Korean students, Choi and Kim (2013) emphasized that career self-efficacy is pivotal for individuals to sustain their career preparation behaviors. Findings from both samples indicated a positive correlation between career self-efficacy and career preparation behaviors. Individuals with positive self-efficacy tended to successfully engage in career exploration behaviors, while those with negative self-efficacy were inclined to avoid such behaviors (Choi & Kim, 2013). Supporting these results, Tsai et al. (2017) conducted research in Taiwan with 613 student participants, which revealed that career self-efficacy is a mediating factor in career preparation. Higher levels of self-efficacy also enhance students' motivation and confidence in career preparation. Further supporting these findings, a study in Taiwan by Chan (2017) reported positive correlations between social support, career self-efficacy, and career exploration. Adachi (2008), in a study conducted in Japan, described students with high levels of career self-efficacy as being more likely to be actively involved and engaged in self and environmental exploration activities.

A correlational study involving 325 final-year undergraduate engineering students at a private university in Malaysia revealed a positive and significant relationship between career self-efficacy and career exploration (Makki et al., 2015). The skills and readiness demonstrated by the final-year students were identified as contributing factors to effective career exploration. This finding is consistent with a separate study that was conducted in 2016 among 62 final-year students (Makki et al., 2016). In that study, high mean scores were reported for readiness, career self-efficacy, and career exploration, highlighting that heightened career readiness and self-efficacy resulted in more active engagement in career exploration.

Despite these findings, more research still needs to be done in Malaysia regarding the relationship between self-efficacy and career exploration among secondary students. Consequently, this research addresses this gap by investigating the relationship between self-efficacy and career exploration among secondary students. Besides that, regression was run to analyze the prediction effect between self-efficacy and career exploration.

The present study aimed to assess the levels of career exploration and the relationship between self-efficacy and career exploration behavior among secondary students. Furthermore, the study aimed to determine whether there are variations in career exploration based on school grades and to investigate potential differences in exploration across different age groups. Hence, the present study addressed the following research questions:

1. What is the level of career exploration among secondary school students in Malaysia?
2. Is there a difference between school grades on career exploration among secondary school students in Malaysia?
3. Is there a relationship between self-efficacy and career exploration among secondary school students in Malaysia?
4. Does self-efficacy predict career exploration among secondary school students in Malaysia?

3. Methodology

3.1. Research Design

The present study implemented a quantitative research approach through a survey methodology to identify the link between self-efficacy and career exploration behavior. The present study used validated questionnaire scales for data collection to examine the correlation between self-efficacy and career exploration.

3.2. Sample study

The respondents of this study consisted of 219 upper secondary students from a government school at Bukit Jalil. Data collection was made in 2019. Stratified sampling methods were applied to choose the participants based on strata. This sampling method divided the population into subgroups, where the sample was selected from each subgroup. The examining outline was isolated into homogeneous and non-covering subgroups, and a straightforward irregular example was drawn inside every subgroup (Bhattacherjee, 2012). As a result, the strata was divided into three (3) grades, namely Form 3, Form 4, and Form 5 students. Samples retrieved from each grade totaled up to 33% or at least 72 students out of the required sample size. For their grade, the total sample included 72 respondents from Form 3 (32.9%), 74 respondents from Form 4 (33.8%), and 73 respondents from Form 5 (33.3%).

3.3. Instrumentation

The first part of the research questionnaire addressed the respondents' demographic data, including gender, school grade, age, and race. Two instruments were employed: (1) the Vocational Identity Status Assessment (VISA) – In-Depth and In-Breadth Career Exploration Scale (Porfeli et al., 2011) and (2) the General Self-efficacy Scale (GSE) (Schwarzer & Jerusalem, 1995). The originality of the instruments was maintained in this study.

The In-Depth and In-Breadth Career Exploration Scale represents a modified version of the Vocational Identity Status Assessment that focused exclusively on the original survey's subscales (Porfeli et al., 2011). Comprising 10 items, this scale was employed to gauge the extent of career exploration undertaken by individuals. The selection of this scale was driven by its appropriateness for use with adolescents. The scoring system was based on a 5-point Likert scale, with responses ranging from (1) Strongly Disagree, (2) Disagree, (3) Agree and Disagree, (4) Agree, to (5) Strongly Agree. Total scores were derived by summing up the individual item scores, where a higher total score indicated greater career exploration. Previous studies have demonstrated the excellent reliability and validity of the subscales. The In-Depth and In-Breadth, Career Exploration Scale exhibited high internal consistency, with coefficient alphas for each subscale ranging from .72 to .88. This establishes the scale's reliability.

The GSE assesses individuals' predictive capabilities in coping with daily hassles and measures their confidence levels in completing tasks (Schwarzer & Jerusalem, 1995). This instrument comprises 10 items and utilized a Likert-like scale from 1 to 4, where: (1) Not at all true, (2) Hardly true, (3) Moderately true, and (4) Exactly true. Scoring involved summing up the responses for each item. The total scores on the GSE ranged from 10 to 40, with higher scores indicating greater levels of self-efficacy. The scale was unidimensional and demonstrated strong internal consistency with Cronbach's alphas ranging between .76 and .90 for individual subscales and .80 for the overall alpha score.

3.4. Data Analysis

The first phase of the data collection process required obtaining permission from relevant authorities, including the secondary school's head office. Once approval was secured, the researchers planned a visit to the school to distribute the questionnaires. The questionnaire was created using an online form, specifically Google Forms. Collaboration with teachers was established to disseminate the Google Forms link to students through their respective classroom WhatsApp groups. The teachers were informed about the required number of participants, and each class, consisting of approximately 12 to 13 students, was encouraged to complete the form. The researchers

made sure to clarify any questions or confusions that the teachers had regarding the instruments. This allows informed and accurate response by the students.

After one month, Google Analytics was employed to compile the collected data. Subsequently, the responses from participants were transferred from Google Forms to Microsoft Excel, where coding was applied for data analysis. Statistical Package for the Social Sciences (SPSS) version 26 was utilized for coding and analysis.

Descriptive statistics such as mean, median, and standard deviation were calculated for quantitative research. One-way ANOVA was employed to determine whether there was a significant difference between school grades concerning career exploration. Additionally, Pearson correlation analysis and regression was applied to test the correlations and identify the predicting factors of self-efficacy on career exploration. A significance level of $p < 0.05$ was considered statistically significant in all analyses.

4. Result

Table 1 shows the mean scores and standard deviation for career exploration behaviors. Mean scores equal to or higher than 35 were considered high in terms of career exploration. The mean score of the overall career exploration was 35.19 (SD = 6.07), thus, the level of career exploration was high, indicating that the level of career exploration behaviors among the Malaysian upper secondary school students was high.

Table 1: Mean and Standard Deviation of Career Exploration

	Mean (M)	SD
Career Exploration	35.19	6.07

Note: M<35 = Low, M≥35= High

Table 2 shows the result of ANOVA between school grades on career exploration. The level of career exploration was significantly different between school grades (F[2,216] = 6.352, p<.05). The highest mean scores obtained for career exploration among the school grades was for Form 4 students (M=37.14), followed by Form 5 (M=34.58) and Form 3 students (M=33.80).

Table 2: Result of One-Way ANOVA between School Grades on Career Exploratio

Grades	n	Mean	SD	df	F	Sig. p
Form 3	72	33.80	5.81			
Form 4	74	37.14	6.04	2,216	6.352	.002
Form 5	73	34.58	5.91			

Table 3 shows the post-hoc test for the ANOVA test. There was a significant difference in the level of career exploration between Form 3 and Form 4 students and between

Form 4 and Form 5 students. No significant difference was found between Form 3 and Form 5 students.

Table 3: Multiple Comparisons of School Grades on Career Exploratio

Grades (I,J)	Mean difference (I-J)	Sig. p
Form 3, Form 4	-3.32958*	.002
Form 3, Form 5	-.76979	.714
Form 4, Form 5	2.55979*	.025

*The mean difference is significant at the 0.05 level.

Table 4 shows the results of the correlation analysis between self-efficacy and career exploration. The Pearson correlation value for self-efficacy and exploration was .369 (p<.01), which showed a significant and positive relationship between the variables. The correlation strength was moderate. Thus, increased self-efficacy was correlated to increased career exploration.

Table 4: Correlation between Self-Efficacy and Career Exploration

Relationship Self-efficacy with	R	Sig.p	Correlation strength
Career Exploration	.369**	.000	Moderate

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

Table 5 below shows the regression result between self-efficacy and career exploration. The results show that the regression model was statistically significant (F=34.24, p<.05). This means that self-efficacy significantly predicted career exploration behaviors among secondary school students.

Table 5: Regression between Self-Efficacy and Career Exploration

Variable	Adj. R^2	R Square	Std.β	F	Sig.p
Self-efficacy	.132	.136	.369	34.235	.001

5.   Discussions and Implications

The level of career exploration among secondary students was high; however, this level only met the bare minimum high score. Nonetheless, this shows that the students were ready to seek and gather information on their career development, choice, and adjustment. Career exploration can thus help the individuals to have clearer information and improve their chances of success in their chosen career path. When individuals are actively involved in career exploration activities, they will gain knowledge and accurate information for their careers (Atkinson & Murrell, 1988).

A significant difference in career exploration levels was found among school grades, which aligned with previous research outcomes (Blustein, 2011; Na & Jung, 2011; Roger et al., 2008; Super & Jordaan, 1973; Taveira et al., 1998). However, it is worth noting that most prior studies indicated that students in higher school grades exhibited greater career exploration behaviors. This is in contrast to the current findings, which reported the highest level of career exploration was among Form 4 students. This discrepancy might be attributed to the age of the students. Approximately half of the Form 4 students in the school were 17 years old, similar to the age of Form 5 students, which meant that most of the students were 17 years old in this study. In line with Blustein (2011), age demonstrates a positive and significant correlation with career exploration behaviors, whether the older the students, the higher the level of career exploration observed. Additionally, past research had indicated that older students who participated in more extracurricular activities tended to experience decreased career indecision and increased career exploration (Denault et al., 2019). This was attributed to the students gaining valuable experiences that contributed to an enhanced sense of career self-efficacy, ultimately leading to increased engagement in career exploration.

Furthermore, the study findings may be influenced by the students' levels of anxiety. Vignoli (2015) identified a significant and positive relationship between various forms of anxiety and career exploration, indicating that higher anxiety levels negatively impacted career exploration. Lower levels of anxiety, on the other hand, were associated with greater exploration. It is worth noting that students in Form 3 and Form 5 undergo standardized examinations, namely the college-based Form Three Assessment (PT3; Malay for *Penilaian Tingkatan Tiga*) and the Malaysian Certificate of Education (SPM; Malay for *Sijil Pelajaran Malaysia*), respectively. The higher levels of anxiety among Form 3 and Form 5 students may thus contribute to the observed lower career exploration behaviors. These findings suggest that factors related to anxiety levels could be significant considerations for future studies.

The result also showed a significant relationship between self-efficacy and career exploration, which is consistent with previous studies (Adachi, 2006; Chan, 2018; Choi & Kim, 2013; Makki et al. 2015; Makki et al. 2016; Tsai et al., 2017). As Blustein (1989) described, self-efficacy can predict an individual's career exploration activity, as self-efficacy is one of the internal motivations that help enhance exploration behaviors. Individuals who have high self-efficacy have a better understanding of themselves, which contributes to better planning for career exploration activities (Blustein, 1989). This proves that self-efficacy is related to career exploration.

According to a study conducted by Gushue et al. (2006), students who were highly confident in their careers also scored higher in knowledge, interest, and goal attainment measures. Foltz and Luzzo (1998) posited that engaging in career exploration activities contributes towards an individual's self-efficacy and that self-efficacy increases through

a variety of interventions, including career counseling. On the other hand, low self-efficacy caused individuals to experience barriers when exploring and advancing their careers (Dawes et al., 2000). Hence, schools must make plans to improve students' self-efficacy levels and ensure a positive career exploration experience.

An increase in self-efficacy is associated with greater career exploration, while a decrease in self-efficacy results in decreased career exploration behaviors. High levels of self-efficacy in career decision-making are also positively correlated with extensive exploration of career options in the United States (Karma & Nadine, 2019). As the authors posited, individuals' self-efficacy is essential to maintain their career preparation behaviors. As a consequence, it is not surprising that individuals with low self-efficacy avoid engaging in career exploration behaviors (Choi & Kim, 2013), especially if such behaviors can cause them further stress and anxiety.

Moreover, individuals with elevated levels of self-efficacy tend to align their self-appraisal with their workability (Sidiropoulou-Dimakakou et al., 2015). Positive correlations exist between individuals' perceptions of their ability to accomplish tasks and their self-efficacy levels, particularly when planning their careers. Therefore, self-efficacy plays a pivotal role in achieving success, especially when individuals possess the necessary skills and have completed tasks related to their profession (Pratiwi et al., 2019).

While self-efficacy is a significant predictor of career exploration, it is crucial to acknowledge that other variables, such as social-cultural background, family environment, peer pressure, guidance, and institutional support systems, can also influence students' career trajectories (Turan et al., 2014; Kayani et al., 2022; Liang et al., 2020). Additionally, external factors like economic conditions, technological advancements, and societal changes can impact students' perceptions of career opportunities and their willingness to explore different paths (Kayani et al., 2022; Liang et al., 2020). In conclusion, while self-efficacy is important in guiding students' career exploration behaviors, it is just one aspect of the broader picture. By taking a comprehensive approach that considers the diverse factors that influence career development, educators, counselors, and policymakers can effectively assist students in navigating their career pathways and achieve their professional goals (Turan et al., 2014; Kayani et al., 2022; Liang et al., 2020).

Consistent engagement with students through career tests, career fairs, seminars, and career counseling sessions is essential to prepare them with career experiences that are appropriate for their developmental age. This implies that higher education institutions should provide more programs and activities involving school students. University career fairs are the best example of engaging interested individuals wanting to enroll in higher education and pursue specific academic specializations. Career knowledge is

also essential for graduate study, especially for those planning to complete postgraduate studies. Hence, concerted efforts between higher education institutions and pre-university institutions are crucial to ensuring a smooth transition for students joining the workforce in the long run. With knowledge and resources, students will be better equipped to successfully plan their careers and pursue further education..

6.   Limitations and Recommendations for Future Studies

It is important to note that the data collected for this study pre-dates the COVID-19 pandemic. Given the current global climate, the educational landscape and the emotional well-being of students have been significantly impacted, which may have repercussions on their confidence levels and career aspirations. As a result, the findings of this research may need to fully capture the nuances of career exploration and self-efficacy in the aftermath of the pandemic. To gain a more complete understanding of the factors that influence career development, future studies should consider the evolving dynamics and obstacles that students face in the post-pandemic era. Comparing the findings between these periods may also be useful to provide more depth and improve understanding of significant contributors to students' career exploration.

This research also did not consider certain factors that can influence the career exploration of secondary school students. For instance, in addition to self-efficacy, socio-cultural, familial, educational, and environmental factors can play a crucial role in shaping students' career aspirations and exploration patterns. As such, it is highly recommended for future studies to broaden their scope to encompass these additional factors to gain a more all-encompassing insight into the career development processes of adolescents.

The study's findings may have limited generalizability due to the small sample size and focus on participants that came solely from one secondary school district. While the study can become representative of its setting, the homogeneity of the sample population and the regional specificity of the study setting may restrict the applicability of the results to a wider population of secondary school students in Malaysia. To improve the external validity of future studies, researchers should aim for more extensive and diverse samples that include participants from various geographic regions and educational backgrounds, including both private and government schools. Furthermore, while the instruments used were tested for their reliability and validity, it is worth noting that the inventory used in this study was created with Western cultures in mind. Future research should focus on adapting and validating assessment tools to improve their relevance to the Malaysian context. By implementing translation and validation processes by experts, it is possible to minimize any potential cultural and linguistic biases and enhance the validity of the measurement instrument.

Furthermore, it is important to mention that the recent study primarily examined the variables that affect career exploration behaviors, specifically self-efficacy, without delving into the underlying factors that contribute to self-efficacy. Although the examination of the correlation between self-efficacy and career exploration is valuable, there may be additional crucial determinants of self-efficacy that could potentially impact the outcomes of career exploration. Additionally, school grade was introduced as one of the independent variables that solely examined the effect between school grade and career exploration. As a future recommendation, the incorporation of school grades or age variables as moderators could be considered to assess their potential impact on the relationship between self-efficacy and career exploration. Concurrently, the same approach may be suggested for students at the university level. Future studies may also consider how academic year and age variable may impact the relationship between self-efficacy and career exploration among Malaysian university students. The findings will be vital to provide empirical evidence for educators and the guidance and counseling unit at both the school and university level to design appropriate intervention plans for students in preparation to enter the career world.

Finally, as the results indicated a significant difference in career exploration among secondary students based on school grades, a future recommendation could involve shifting the focus to students entering university. For example, students in the Malaysian Matriculation Program, or A-level Program, are closer to making final decisions about their tertiary education, which will bring them closer to their career of choice. Examining pre-university students' self-efficacy and career exploration levels can provide valuable insights for counselors in both school and university settings. While school counselors can guide students toward their academic interests and career inclinations, university counselors or academic advisors can assume the role of providing current and consistent information about the academic program available. By accepting school visits and introducing both students and teachers to various course programs offered at the university, students may receive direct guidance and be better guided when deciding to enter specific courses. This will further help direct students to suitable career pathways and avoid enrolling in university courses that contradict their personal needs, values, and career interests and inclinations.

Furthermore, while it is critical for universities to maintain course curricula that are aligned with the demands of the labor market, the transition from school to university in terms of students' academic interests and inclinations while still in school should not be disregarded. Academic advisors at universities play an important role in connecting the university and pre-university communities by ensuring that teachers or instructors at pre-university institutions are well-informed about the students' pre-requisites, program requirements, and academic standards for admission to university. This can be accomplished through coordination between the Ministries of Education and Higher

Education. Attempts at balancing the demands of many academic stakeholders could provide various viewpoints to inform support and guidance initiatives, enhancing career knowledge and exploration among the enthusiastic young population.

7.   Conclusion

The study studied the relationship between self-efficacy and career exploration among upper secondary students in Malaysia. The study focused on the general self-efficacy and respondents' demography, such as school grades, on career exploration. Past literature regarding self-efficacy and the career development theory was reviewed to highlight significant findings for each associating variable. Based on the findings, it was concluded that self-efficacy positively influences career exploration. Therefore, increased self-efficacy among upper secondary school students contributes to an increase in career exploration behaviors. This study proves a significant relationship between self-efficacy and career exploration, which prompts school leaders, administrators, and counselors to take action to enhance students' career satisfaction within the school compound before graduating. The study provided insights and understanding of the importance of self-efficacy and how it affects career exploration among young adolescent groups, which will encourage efficient career planning and facilitate career preparation and readiness. Higher education institutions will also find the current study beneficial to design more comprehensive career exploration interventions. The limitations of this study were discussed, and the authors suggested future studies to identify variables and factors of self-efficacy and career exploration.

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