

**ANTECEDENTS OF LIFE SATISFACTION AND THE
MEDIATING EFFECTS OF RESILIENCE: A STUDY OF
WORKING ADULTS FROM THE ECONOMIC
PERSPECTIVE**

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ABSTRACT

The Malaysian government has recently targeted to achieve the status of high-income nation with better quality of life in the year 2025. Apparently, life satisfaction in Malaysia is still low, especially for those aged 20-39 years old. Therefore, this study aims to examine the determinants of life satisfaction among working adults aged 20-39 years old. In addition, this study also attempts to explore whether the resilience can mediate the relationship between determinants and life satisfaction. Data were collected from 384 respondents through self-administrative questionnaires. The SmartPLS Version 3.0 was used to perform the Partial Least Square of Structural Equation Modelling (PLS-SEM). In line with this, the results provide two notable findings. First of all, working adults' financial literacy is found to provide a positive impact on their life satisfaction. Financial literacy enables individuals to better allocate their lifetime resources and persist with the daunting process of financial management. As a result, their ability in their money management would increase their life satisfaction. Secondly, resilience is found to mediate the relationship between physical health status and life satisfaction. Resilience is one of the factors of enhancing health awareness that causes a quick response to change the health behaviour to cope with the stress in having a good healthy life. As a consequence, those with good health status could have a relatively low depression rate and increase work productivity, which contributes to satisfaction in their life. Based on the findings, this study suggests that the Malaysian Financial Planning Council could further improve their courses to enhance the

financial knowledge, financial attitude and training financial management behavior among working adults. In addition, the government is suggested to provide effective psychological interventions in the workplace. This includes promoting primary care prevention of physical ill-health among working adults in the country for the improvement of their life satisfaction.

Keywords: life satisfaction; financial literacy; resilience; Wilayah Persekutuan Kuala Lumpur (WPKL)

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CHAPTER 1: INTRODUCTION

1.1 Overview

The chapter highlights the importance of life satisfaction by elaborating on the issue and main objectives. The explanation in the chapter is important so that the emphasis on the direction of the study can be placed.

1.2 Background of Malaysian Quality of Life

In 1957 before Malaysia's independence, Malaysia is one of the developing countries with per capita incomes below \$1,025 ([World Bank Group, 2019](#)). From 1960 to 1970, Malaysia's economic position was strong due to major primary commodities such as tin, petroleum, palm oil, and rubber ([Yusoff, Hasan & Jalil, 2000](#)). On top of that, in the early 1970, Malaysia started to plant more oil palms, leading Malaysia to become the largest producer and exporter of palm oil in the world. The total share of palm oil increased from 9.6% to 25% during the period of 1970 - 1980. Besides that, many high

technology industries developed in Malaysia in the year of 1990 included advanced electronics, biotechnology, scientific instruments, advanced composite materials, software engineering, automated manufacturing systems, alternative energy and aerospace. Hence, Malaysia is considered a lower-middle-income country (per capita income between \$1,026 and \$3,995) during the period from 1990 to 2002 ([World Bank Group, 2019](#)).

In mid-May 1997, amid the Asian financial crisis, Malaysia has experienced an economic downturn. This crisis caused currency depreciation, the negative effect on wealth, decreasing trend in stock prices and the market of the property slump ([Ariff & Abubakar, 1999](#)). Resulting from this, inflation rate increased from 2.7% in 1997 to 5.3% in 1998, while unemployment rate increased from 2.5% in 1997 to 3.2% in 1998. As a result, the then-Prime Minister, *Yang Amat Berhormat* Tun Dr Mahathir Mohammad pegged the Malaysian currency at RM 3.80 per USD in order to reduce capital outflows from the country.

During the 1997/1998 Asian financial crisis, the Malaysian government drew concern to the residents' quality of life since the quality of life in the country is low. In this regard, the government has proposed Economic Planning Unit (EPU) in 1999 to pioneer the Malaysian Quality of life (MQLI), which measures the Quality of life of the residents ([Dali, Sarkawi, & Abdullah, 2017](#)). The EPU started with the series of its MQLI of 1999, 2002, and 2004. Since Malaysia progressed towards upper-middle-income economy, the

MQLI was replaced by the Malaysian Well-being index (MWI) in 2011. The MWI constructed 14 components of economic and social well-being aspects, such as housing, education, leisure, health, public safety, governance, social participation, income and distribution, culture, family, transport, environment, working life, and communications. In contrast, the MQLI included 11 components of economics and social life components: public safety, family life, housing, social participation, environment, income and distribution, transport and communications, education, health, and working life. Overall, the MWI report indicates that that level of well-being of the Malaysians had increased due to the development of the public policies and strategies. Furthermore, the incidence of poverty dropped from 5.5% in 2000 to 3.8% in 2009 (Muhammed & Haron, 2011; Chukwukere & Baharuddin, 2012). In 2003, Malaysia stood as one of the upper-middle income countries with per capita income between \$4,046 and \$12,535 (World Bank Group, 2020). During the period from 2000 to 2012, the MWI increased by 25.4 points with the growth rate of 1.9 % per annum (Malaysian Well-being Report, 2013). Due to foreign direct investment and manufacturing exports, exceptionally high technology products contributed 5% - 75% to Malaysia's total export (World Bank Group, 2019).

In lieu of “quality of life”, this study places an emphasis on “life satisfaction” as the measurement of subjective well-being as it is one of important factors of the individual’s general well-being (Gokalp & Topal, 2019). Life satisfaction refers to how people feel and think about their lives. Also, life satisfaction is the acceptance of the living in a standard, regardless

of one's personal satisfaction of life while quality of life is measured by specific standards which is more general (Yildirim, Kilic, & Akyol, 2013). On top of that, life satisfaction is defined as individuals' evaluation of their lives as a whole, while quality of life refers to the general well-being (Yildirim et al., 2013). Several studies find that satisfaction of life is used to evaluate individuals' lives as a whole. On top of that, the satisfaction of life has also been used to measure the quality of life (Andrews & Withey, 1976; Campbell, 1976; George & Bearon, 1980; Calman, 1987). Besides that, the aspects of life satisfaction include goal achievements, social aspirations and materials (Haller & Hadler, 2006; Diener & Ryan, 2009). These aspects can be influenced by job, income, educational, gender, marital status, relationships, environment, health, emotional and other personal-related matters (Celinska & Olszewski, 2013; Banjare, Dwivedi, & Pradhan, 2015; Ackerman, 2021). Also, individuals' satisfaction of life can be influenced by their emotional conditions (Woo, kim & Uysal, 2016).

In Malaysia, the area of WPKL is a competitive work and living place with high costs of living. As a consequence, the targeted working adults aged 20-39 years old are likely to face work-related stress and have financial worries (Schulenberg et al., 2004). Meanwhile, older working adults are less likely to worry about this as many of them have established good careers, families, achievements and confidence in themselves (Cardiac Screen Ltd, 2019). Therefore, those working adults aged 20-39 years old tend to encounter several mental health related problems, such as depression and negative emotion, thus they are prone in misusing illegal or prescription drugs and

excessive alcohol consumption ([The Star, 2019](#)). Sometimes, stress that is persistent or overwhelming could seriously damage individuals' mental health. Therefore, resilience is recognized as an important attribute for individuals in handling depression, stress, or tense situations. As a result, those people who are resilient tend to have a good, pleasant and meaningful life ([Cohrs, Christie, White & Das, 2013](#)).

Resilience and life satisfaction are closely related. Those individuals who have psychological resilience could think rationally in confronting adversities and solving problems, and discipline themselves by carrying out responsibilities in their daily lives ([Mcknight et al., 2002](#)). Resilient persons are able to face any uncertainties, adapt to life challenges and maintain better life satisfaction ([Leppin et al., 2014](#); [Zeti, 2018](#)). Adults need to develop their resilience to handle any adversities, work-related stress and experiences with their open minds in their working life ([Gentle, 2019](#)). On top of that, Malaysians are found to be flexible and adaptable although they are facing many psychological challenges, thereby solving the adversities effectively ([Ting & Foo, 2018](#); [Zeti, 2018](#)).

Resilient people who have a positive rather than negative attitude prefer to choose a more balanced and positive outlook on their lives. In turn, they demonstrate better problem-solving with their knowledge potential and motivation. However, to the best of our knowledge, the existing literature places an emphasis on earlier determinants of life satisfaction ([Daniel &](#)

Brown, 2016; Hasibuan, Lubis & Altsani-HR, 2018; Lee & Lee, 2019; Jovanovic & Joshanloo, 2019; Ilies, Yao, Curseu & Liang, 2019; Ngoo, Tan & Tey, 2020; Dahiya & Rangnekar, 2020). Little is known about the role of resilience as a mediator in influencing life satisfaction among working adults in metropolitan areas. Those residents in the metropolitan area tend to feel more stressed, pressured or depressed as the area provides high costs of living and a competitive workplace (Haart, 2019). To better explain the role of resilience, this study attempts to examine the mediating effect of resilience on working adults' life satisfaction. The increase of resilience among working adults is the priority for the country to develop resources for the improvement of residents' standards of living (Abolghasemi & Taklavi-Varaniyab, 2010).

1.3 Problem Statement

Recently, the Malaysian government has targeted to achieve the goal of becoming a high-income nation with better quality of life in 2025. The development has caused many working adults to encounter mental health problems, including stress, depression, mental illness and chronic diseases. This consequently reduces their life satisfaction. Hence, the prevalence of Malaysians' mental health problems was increased from 10.7% in 1996 to 29.2% in 2016 (National Health and Morbidity Survey, 2015; Chua, 2020).

Mental health problems affect individuals' physical health, financial, education, work performance and daily living (Michelle, 2000). During the period from 2011 to 2017, the percentage of Malaysians who encounter mental health problems due to the rate of depression and anxiety disorder has increased from 12% to 29% (National Health and Morbidity Survey, 2018; The Star, 2018; Othman & Essau, 2019). Because of the high prevalence, anxiety, depression and stress have become the central issues among working adults especially for those living in the metropolitan areas such as Malaysian capital town, namely the Kuala Lumpur Federal Territory or *Wilayah Persekutuan Kuala Lumpur* (WPKL).

Physical health status is one of the important factors in influencing life satisfaction among working adults in the WPKL. In 2015, this metropolitan was recorded to have 39.8% of residents who are prone to suffer from depression and anxiety disorders as compared to other major cities across the country's states (National Health and Morbidity Survey, 2015). As shown in Table 1.1, in 2019, the WPKL was listed as the fourth most overworked cities in the world with the high depression rate (The Star, 2019; Ng, 2019). Most adults who are overworking are causing stress to their minds and body, subsequently leading to their poor physical health status. Their poor physical health status would decrease their ability in performing their daily tasks. Hence, their work productivity tends to be low and financial status becomes unstable, thereby reducing the level of their life satisfaction.

Table 1.1: Top overworked cities by ranking (work intensity scores)

	Scores
Tokyo, Japan	100
Singapore, Singapore	95.4
Washington DC, USA	93.4
Kuala Lumpur, Malaysia	93.3

Source: [Ng \(2019\)](#)

Note: Work intensity score is about hours worked per week, arrival at work, minimum vacations offered, vacations taken, amount of paid maternal and parental leave (days), unemployment rate, and time spend on commuting.

Besides, workers' educational attainment is also a targeted factor of life satisfaction. As reported, 79% of the workers in the WPKL have education attainment at the tertiary level ([Jabatan Perangkaan Malaysia, 2021](#)). As established, educated workers are able to achieve higher productivity, thereby contributing to a better standard of living. However, some educated workers have high expectations in order to cover their high cost of living in the WPKL. The cost of living in WPKL is twice higher than other states in Malaysia. As a consequence, 22% of employees become stressed as they have many financial adversities ([AIA Vitality, 2019](#)). As shown in [Table 1.2](#), WPKL was recorded to have the highest growth rate of consumer price index at 1.4% in 2018 and 1.2% in 2019 with an increase in the prices of food and non-alcoholic beverages by 4.5% in 2018 and 5.7% in 2019, respectively ([Department of Statistics Malaysia, 2019](#)). As a result, the current cost of living index of 93 for WPKL as shown in [Table 1.3](#) is found to rank the highest in Malaysia ([Expatistan, 2022](#)). Since the WPKL area is a business and financial centre, the government provides many incentives to offer investment opportunities for developing infrastructure and a financial hub, thereby increasing the costs of living in that area ([Schlomach, 2017](#)).

Table 1.2: Consumer price index in Malaysia by state, 2018-2019

	Overall (2018)	Overall (2019)	Food & Non- Alcoholic Beverages (2018)	Food & Non- Alcoholic Beverages (2019)
Wilayah Persekutuan Kuala Lumpur	1.4	1.2	4.5	5.7
Pulau Pinang	0.9	1.1	2.4	3.7
Johor	1.1	0.6	2.3	3.7
Selangor	1.1	0.9	2.2	4.6
Terengganu	0.4	0.1	2.0	3.7
Perak	0.7	0.6	1.9	3.6
Negeri Sembilan	1.2	0.7	1.8	3.3
Melaka	0.8	0.1	1.7	2.6
Kelantan	0.7	0.4	1.6	2.9
Pahang	0.6	0.3	1.5	3.3
Kedah & Perlis	0.3	0.2	0.9	1.4

Source: [Department of Statistics, Malaysia \(2019\)](#)

Table 1.3: Cost of living index by cities in Malaysia, 2022

Ranking		
1 st	Wilayah Persekutuan Kuala Lumpur	93
2 nd	Kota Kinabalu	84
3 rd	Johor Bahru	82

Source: [Expatisan \(2022\)](#)

Furthermore, financial situation is one of the factors in determining working adults' life satisfaction. On average, employed graduates and households in the WPKL are recorded to have the median incomes of RM5,471 and RM10,549, respectively ([Department of Statistics Malaysia, 2019](#)). However, their financial situation could not be sufficient for them to cover their high living costs ([Department of Statistics Malaysia, 2019](#)). To offset the high living costs, they always tend to be frugal in making their financial-related decisions by applying loans from financial institutions ([Financial Economics Network, 2019](#)). Based on [Table 1.4](#), the WPKL is recorded to have the highest non-performing loans with a total of

RM417,859,000 as compared to other areas in Peninsular Malaysia, Sabah and Sarawak ([Alliance Bank, 2019](#)). Also, the highest non-performing loans with the amount of RM329,112,000 happened in the WPKL ([Affin Bank, 2018](#)). Therefore, those people who have a lack of financial literacy are likely to make a poor financial decision, resulting in many of them struggling to keep up with payments, such as revolving credit and taking out mortgages that they could not afford ([Santos & Abreu, 2009](#); [Zeti, 2018](#)).

Table 1.4: Non-performing loans by geographical regions in Malaysia

Banks		RM'000
Alliance	Central region	417,859
	Southern region	65,560
	Northern region	34,658
	Sabah region	24,263
	Sarawak region	9,512
Affin	Wilayah Persekutuan Kuala Lumpur	329,112
	Selangor	92,175
	Negeri Sembilan	16,478
	Pahang	15,544
	Kedah	8,550

Source: [Annual report of Alliance & Affin Bank \(2018\)](#)

The non-performing loan could contribute to the increasing number of bankruptcy cases. For example, new bankruptcies in the WPKL had increased by 8,0625 cases during the period of 2015 - 2019 ([Malaysian Department of Insolvency, 2019](#)). Personal loans have contributed to 27.76% of bankruptcy cases. Then, there were cases of hire purchase vehicles that contributed to 24.73% of bankruptcy. Next, 14.09% and 9.91% of bankruptcies were due to housing loans and debts of using credit cards, respectively ([Malaysian Department of Insolvency, 2019](#)).

As shown in [Table 1.5](#), the highest percentage of bankruptcy cases is recorded to happen in the WPKL with 2.66% of the population. Malaysian youths generally lack the financial literacy which indicates that they do not have money management knowledge, perhaps mirrored by 30% of EPF members withdrawing almost all of their savings from the first account ([Alias, 2021](#)) and 84% of them typically used their savings to cover their daily expenses at the end of the month ([National Strategy for Financial Literacy, 2019](#)). People with financial literacy have the ability to understand and effectively use various financial skills, thus they use the financial knowledge to have a proper financial planning and maintain a stable financial situation in order to survive in a competitive workplace with high costs of living.

Table 1.5: Bankruptcy cases by states, Malaysia

	Cases	Population	Percentage
Wilayah Persekutuan Kuala Lumpur	47591	1790000	$\frac{47591}{1790000} = 2.66\%$
Johor	51130	3760000	$\frac{51130}{3760000} = 1.36\%$
Penang	21976	1770000	$\frac{21976}{1770000} = 1.24\%$
Selangor	74182	6480000	$\frac{74182}{6480000} = 1.14\%$
Melaka	9116	930000	$\frac{9116}{930000} = 0.98\%$
Perak	20878	2510000	$\frac{20878}{2510000} = 0.83\%$
Negeri Sembilan	8692	1130000	$\frac{8692}{1130000} = 0.77\%$
Kedah	15100	2180000	$\frac{15100}{2180000} = 0.69\%$
Pahang	11097	1670000	$\frac{11097}{1670000} = 0.66\%$
Perlis	1148	250000	$\frac{1148}{250000} = 0.46\%$
Kelantan	8431	1890000	$\frac{8431}{1890000} = 0.45\%$
Terengganu	5377	1250000	$\frac{5377}{1250000} = 0.43\%$

Source: [Malaysia Department of Insolvency \(2018\)](#)

From the problems mentioned above, those people who have resilience skills might establish positive mental health that contributes to better physical health status, thereby improving their financial literacy to maintain a better financial situation and subsequently, obtain better job promotion. In line with this, resilience is important to mediate the financial literacy, financial situation, physical health status, educational attainment, and employment policy to ensure life satisfaction among working adults in WPKL.

1.4 Research Questions

This study attempts to investigate the determinants that directly or indirectly influence the working adults' life satisfaction in WPKL. A total of 10 research questions has been designed.

- i) Is there a significant relationship between the financial literacy and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- ii) Is there a significant relationship between the financial situation and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?

- iii) Is there a significant relationship between the physical health status and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- iv) Is there a significant relationship between the educational attainment and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- v) Is there a significant relationship between the employment policy and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- vi) Does resilience mediate the relationship between the financial literacy and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- vii) Does resilience mediate the relationship between the financial situation and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- viii) Does resilience mediate the relationship between the physical health status and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- ix) Does resilience mediate the relationship between the educational attainment and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- x) Does resilience mediate the relationship between the employment policy and life satisfaction among working adults in the Wilayah Persekutuan Kuala Lumpur?

1.5 Research Objectives

The main objective for the study is to identify the determinants of life satisfaction with the mediation effect of resilience. To achieve this, the study establishes the following 10 specific objectives.

- i) To investigate if there is a significant relationship between financial literacy and life satisfaction among working adults.
- ii) To investigate if there is a significant relationship between financial situation and life satisfaction among working adults.
- iii) To investigate if there is a significant relationship between physical health status and life satisfaction among working adults.
- iv) To investigate if there is a significant relationship between educational attainment and life satisfaction among working adults.
- v) To investigate if there is a significant relationship between employment policy and life satisfaction among working adults.
- vi) To investigate if resilience mediates the relationship between financial literacy and life satisfaction among working adults.
- vii) To investigate if resilience mediates the relationship between financial situation and life satisfaction among working adults.
- viii) To investigate if resilience mediates the relationship between physical health status and life satisfaction among working adults.

- ix) To investigate if resilience mediates the relationship between educational attainment and life satisfaction among working adults.
- x) To investigate if resilience mediates the relationship between employment policy and life satisfaction among working adults.

1.6 Significance of Study

The findings from the study are expected to provide insights on the determinants that affect working adults' life satisfaction in the context of metropolitan area. Besides, the findings can serve as the reference for policymakers to implement some effective plans and programs of improving working adults' life satisfaction. Policymakers can implement some courses to improve individuals' financial decision-making skills for saving, investing, spending and lending. A better financial literacy can lead them to have a better life in the present and future.

For further improvement in explaining life satisfaction, this study attempts to examine the mediating effect of resilience on working adults' life satisfaction. For example, resilient working adults would use their skills or resources to manage their health behaviours, thereby contributing to good physical health status and, in turn, increasing workers' productivity. As higher productivity would increase the wages and economic growth, workers with

positive health status could have a better living standard and this will indirectly increase their life satisfaction.

However, most past studies are found to target the elderly or those who have entered late adulthood. In order to provide a comprehensive understanding on determinants of life satisfaction among individuals with a range of age groups, this study attempts to focus on working adults aged 20-39 years old who live in the metropolitan area. Therefore, this research is also beneficial to the working adults themselves to understand the importance of the factors that influence their life satisfaction when they are 20-39 years old. They can pay attention to which factors that influence their satisfaction of life and take note of the factors in order to improve their lives. As the examples, they can learn how to plan budgets for long-term saving to own properties, build a retirement nest egg, also manage and pay off their debts.

1.7 Chapter Layout

The layout of the thesis is arranged as follows. Chapter 2 provides the review of the existing literature on life satisfaction. In Chapter 3, the sample size, sampling location, and data and methodology used are explained. In Chapter 4, the discussion on the empirical results is provided. Lastly, Chapter 5 touches on the summary of the main finding, provides some theoretical and practical

implications for the different parties and offers the recommendations of the study.

1.8 Conclusion

This chapter places an emphasis on the direction of the study by looking into determinants of life satisfaction among working adults residing in a Malaysian metropolitan area. The direction is supported with problem statement, research questions and research objectives. In line with the direction, the expected findings of the study are useful for policymakers in designing various programs that enhance the level of life satisfaction among Malaysians, especially for the working adults.

CHAPTER 2: LITERATURE REVIEW

2.0 Overview

Currently, life satisfaction is one of the most favourite research areas among scholars where they evaluate the standard of living in the targeted country (Ginevra, Magnano, Lodi, Annovazzi, Camussi, & Patrizi, 2018; Russo-Netzer, Horenczyk, & Bergman, 2019). Life satisfaction is defined as individuals' perception on their life quality in terms of their age, gender, physical health status, behaviour, availability of social support, cultural background, education attainment and financial management (Seibel & Johnson, 2001; Chow, 2005; Bhandari, 2012).

Furthermore, it also influences many aspects of individuals' lives. For example, those individuals who have high level of life satisfaction could positively contribute to their job performance, mental health and physical health (Siahpush, Spittal, & Singh, 2008; Barger, Donoho, & Wayment, 2009; Erdogan, Bauer, Truxillo, & Mansfield, 2012; Lee, 2017).

2.1 Theoretical Framework

The bottom-up theory is developed by [Kinchla and Wolfe \(1979\)](#). According to this theory, [Seibel and Johnson \(2001\)](#), [Schimmack and Oishi \(2005\)](#), [Chow \(2005\)](#) and [Bhandari \(2012\)](#) state that individuals' perceptions are based on finance, health, education, social support, relationship, and other personal-related matters to promote their overall life satisfaction. The different perceptions are shown in [Figure 2.1](#).

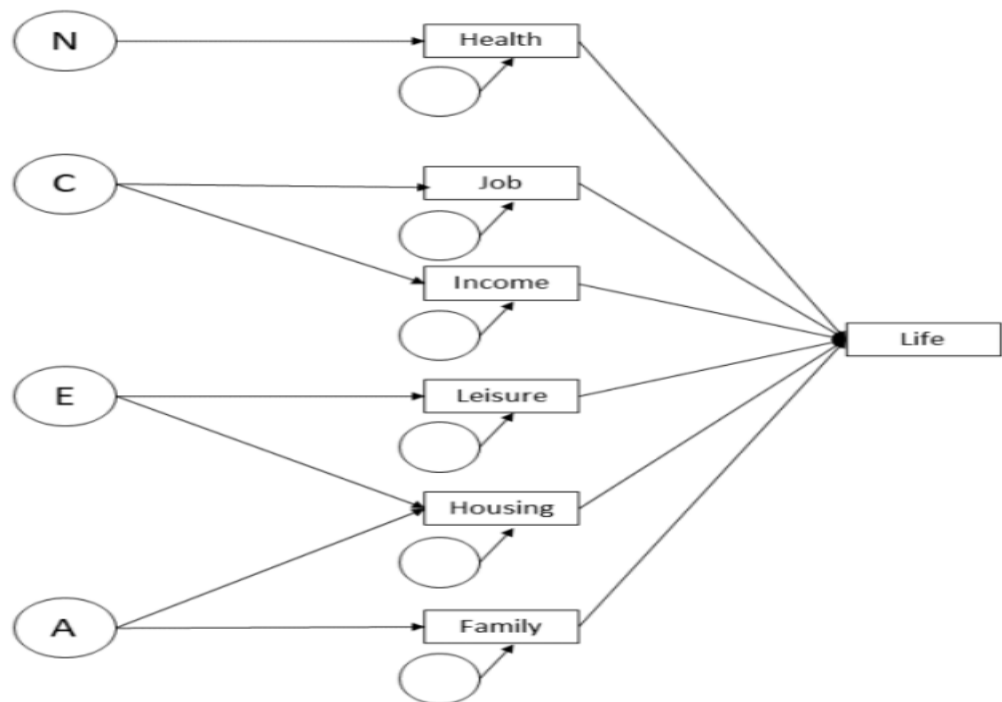


Figure 2.1: An Example of Bottom-Up Theory on Life Satisfaction

Source: [Diener \(1984\)](#)

Furthermore, the bottom-up theory was firstly implemented by [Diener \(1984\)](#) into the study of life satisfaction. The author states that life satisfaction is simply the sum of many small aspects (bottom-up theory). Based on the author's view, individuals could evaluate their life satisfaction according to their personal matters in terms of finance, health, education, relationship, social support and environment ([Heller, Illies, & Watson, 2006](#)). The author's view is shown in [Figure 2.2](#)

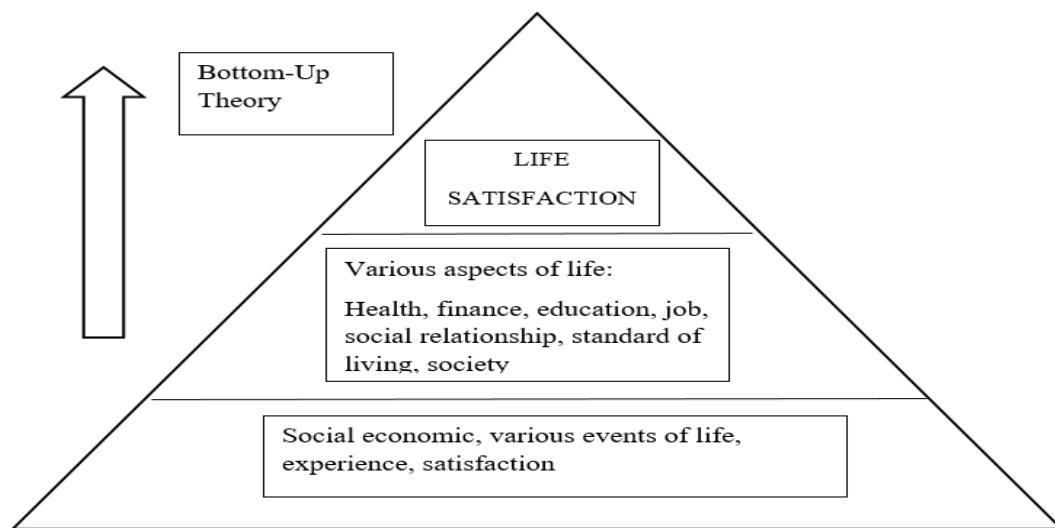


Figure 2.2: Bottom-up theory of life satisfaction model
Source: [Diener \(1984\)](#)

The bottom-up theory had been widely used to illustrate the concept of life satisfaction ([Diener, 1984](#); [Krause & Jay, 1991](#); [Heady et al., 1991](#); [heller & Watson, 2004](#); [Loewe, Bagherzadeh, Luis, Thieme, & Joan, 2014](#); [Gan, Ong, Lee, & Lin, 2020](#)). In other words, evaluating individuals' life satisfaction is based on different domains of factors (personal-related matters). For example, those individuals that have a better education level could enhance their job or

promotion opportunities, thereby contributing to better financial performance. This could allow them to achieve financial stability that reduces the level of their stress, depression and anxiety (Schulenberg et al., 2004). As a result, they are prompt to enjoy higher level of life satisfaction. Referring to the study by Heller et al., (2006), job and health satisfaction are main determinants that influence individuals' life satisfaction.

As stated by Schulenberg et al. (2004), younger working adults are generally facing various challenges in the workplace due to the highly competitive environment. Under such environment, most working adults do not find it easy to attain their life satisfaction. Furthermore, Sanci (2018) finds that those working adults are prone to committing risky behaviours such as drug abuse, excessive alcohol consumption and smoking as well as mental illnesses like depression and anxiety due to the lack of life satisfaction. Therefore, they need to have resilience as an essential attribute for handling complex and tense situations in their lives. Mcknight, Huebner, and Suldo (2002) and Gan et al. (2020) state that those individuals with resilience skills would tend to cope with adversities and challenges in the workplace.

In other words, Ting and Foo (2018) also Jovanovic and Joshanloo (2019) state that working adults who possess psychological resilience could think rationally to avoid risky and unhealthy behaviours, thereby lowering their tendency to get ill, stressed or depressed. In turn, their ability to handle problems effectively tends to increase their job promotion, leading to a higher level of life

satisfaction. In the context of Malaysia, [Ting and Foo \(2018\)](#) and [Zeti \(2018\)](#) find that individuals could be flexible and adaptable although they face many psychological challenges in solving the adversity effectively. Various aspects of life as predictors in past studies are summarized in [Table 2.1](#).

Table 2.1: Various aspects of life as predictors in past studies

Author	Health	Financial situation	Education	Financial literacy	Employment policy
Flanagan (1978)	✓				✓
Medley (1980)		✓			✓
Krause (1991)	✓	✓			
Argyle (2001)	✓	✓			
Lee et al. (2002)	✓	✓	✓		
Flouri & Buchanan (2003)			✓		
Schulenberg et al. (2004)	✓	✓	✓		
Fujita & Diener (2005)			✓		
Rojas (2006)	✓	✓			
Swami et al. (2007)	✓				
Amah (2009)					✓
Hoom (2009)					✓
Kapteyn et al. (2009)		✓			
Shim et al. (2009)		✓		✓	
Whiteley et al. (2010)					✓
Daraei & Mohahery (2012)			✓		
Howell et al. (2012)		✓			
Taft et al. (2013)		✓		✓	
Loewe et al. (2013)	✓	✓	✓		
Angelini et al. (2014)	✓				
Amaike (2014)			✓		
Carr & Chung (2014)					✓
George et al. (2014)		✓			
Knoll & Pitlik (2014)					✓
Ngoo et al. (2014)			✓		✓
Ali et al. (2015)		✓		✓	
Clement & Sauer (2015)	✓				
Tariq (2015)		✓			
Boo et al. (2016)			✓		
Daniel & Brown (2016)		✓			
Hoskins & May (2016)	✓				
Lam et al. (2016)			✓		
Yap et al. (2016)		✓		✓	
Ngamaba (2016)	✓	✓			
Hassibuan & Lubis (2017)				✓	
Barand & Imanian (2017)				✓	
Thelma (2017)	✓				
Zanjani et al. (2017)	✓				
Yiap & Geetha (2017)	✓				
Kasmaoui & Bourhaba (2017)	✓				
Goel et al.(2018)	✓				
Hornsery et al. (2018)	✓				

Park et al. (2019)	✓				
Ilies et al. (2019)	✓				
Jovanovic & Joshanloo (2019)	✓				
Pan et al. (2019)	✓				
Lee & Lee (2019)	✓				
Ngoo et al. (2020)	✓				
Dahiya & Rangnekar (2020)	✓				
Mowisch et al. (2020)	✓				
Wang et al. (2020)	✓				
Han & Kim (2021)					✓
Pollmann-Schult (2021)				✓	
Muhammad & Joy (2022)	✓	✓		✓	
Tavares (2022)	✓			✓	
Kasiker & Peker (2022)	✓				

Source: Developed for study

2.1.1 The Influence of Financial Literacy on Life Satisfaction

[Shim et al. \(2009\)](#) use AMOS 6.0 to analyse financial literacy and life satisfaction in the South-western United States. They find that individuals' financial literacy significantly relates to their life satisfaction. As a result, they could budget, manage and plan their saving for any emergencies that would help them to avoid financial scam and fraud. Next, [Taft, Hosein, Mehrizi and Roshan \(2013\)](#) state that people who have financial knowledge can increase their savings, asset management, correct purchase decisions and investing, and embark upon economic activities to improve their life satisfaction. Furthermore, [Ali, Rahman, and Bakar \(2015\)](#) demonstrate that individuals also need to manage and plan their finance correctly because they may face some financial adversities in their lives.

In Kelurahan Sepanjang Jaya, Bekasi, [Yap et al. \(2016\)](#) attempt to examine the effect of residents' financial literacy towards their financial situation and quality of life. Their findings indicate that financial literacy significantly influences the financial situation to ensure the quality of life. When individuals correctly manage their finance, they would have better-living conditions. In the case of Indonesia, [Hassibuan and Lubis \(2017\)](#) find that those individuals with financial knowledge would develop good financial management to avoid financial scam and fraud, thereby obtaining greater life satisfaction. [Barand and Imanian \(2017\)](#) also state that well-managed finance could meet the goals and needs or a way to reach better life satisfaction. Besides

that, [Ilies, Yao, Curseu and Liang \(2019\)](#) further indicate that financial literacy influences financial behaviour and predicts better financial performance. Lastly, [Han and Kim \(2021\)](#) demonstrate that financial literacy could help workers with disabilities in accumulating the assets for their future development. Thus, through the assets, it can enhance the life satisfaction of workers with disabilities. As a result, their money management skill would boost their life satisfaction.

The majority of studies demonstrate that individuals' life satisfaction could be positively related to financial literacy. For instance, [Shim et al. \(2006\)](#), [Taft et al. \(2013\)](#), [Ali et al. \(2015\)](#), [Yap et al. \(2016\)](#), [Barand and Imanian \(2017\)](#), [Hassibuan and Lubis \(2017\)](#), [Ilies et al. \(2019\)](#) and [Han and Kim \(2021\)](#). Those individuals blessed with better knowledge about financial-related matters would be able to manage their financial budgeting properly in reducing their financial burdens and avoiding financial scam and fraud. This eventually improves their life satisfaction. The higher the level of financial literacy, the higher the level of life satisfaction. This leads to the following [H₁](#).

H₁: Higher level of financial literacy positively influences life satisfaction.

In the case of the United States of America, [Cohn, Fredrickson, Brown and Mikels \(2009\)](#) find that individuals' resilience could mediate the relationship between their financial literacy and life satisfaction. This finding suggests that the resilient ones would feel better and be more satisfied with their

lives because they would use their financial knowledge to develop sound financial resources as the recipe for living well. Next, Richards (2014) performs the analysis of the multilevel model. The author's results indicate that an emergency situation may influence the personal financial situation. Hence, a poor financial situation can affect their materials of well-being.

The findings by Cohn et al. (2009), Richards (2014), Muir et al. (2016), Muir, Reeve, Connolly, Marjolin, Salignac, and Ho (2016), Maison (2019) and Jayasinghe et al. (2020) demonstrate that those equipped with resilience skills could control or manage their financial literacy and access external resources to obtain financial adversity. In turn, their higher financial capability tends to generate life satisfaction in general. Also, William (2007), Rothwell et al. (2016) and Maison (2019) state that improving resilience could develop good financial behaviour of people to promote their financial literacy and improve their financial decision-making skills. In the context of Australia, Jayasinghe, Selvanathan and Selvanathan (2020) apply the ordered logit model and find that people without resilience skill would encounter problems in accessing financial services, thereby leading to a low level of life satisfaction. In short, resilient people can improve their financial literacy level, hence enhancing their life satisfaction level. This fact prompts the following H₂.

H₂: Financial literacy is mediated by resilience towards life satisfaction

2.1.2 The Influence of Financial Situation on Life Satisfaction

In Terre Haute, [Medley \(1980\)](#) finds that the relationship between financial situation and life satisfaction is significant for men aged 65 years old and above, while this relationship is insignificant for women aged 65 years old and above. Men's life satisfaction tends to be linked with their age, but women's apparently, is not. In the Netherlands and the United States, [Kapteyn et al. \(2009\)](#) find that individuals' income or financial situation positively relates to their life satisfaction. In Malaysia, [Howell et al. \(2012\)](#) use the World Values Survey to demonstrate that education and financial situation are significant predictors of life satisfaction. Their findings show that more educated individuals tend to have high job opportunities in improving their financial situation and this indirectly enhances their life satisfaction.

Additionally, [Daniel and Brown \(2016\)](#) apply the fixed effects ordered logit model in West and East Germany to ascertain the impact of monetary financial position and a household's subjective overall life satisfaction. Their results show that net wealth positively affects the overall satisfaction of life. When households are suffering from financial concern, they are likely to reduce their daily needs. As a consequence, their life satisfaction would be negatively affected. In Serbia, [Jovanovic and Joshanloo \(2019\)](#) find that financial situation could provide a dominant effect on life satisfaction, where a poor financial situation could reduce individuals' satisfaction in a large city. It is not surprising

that lower level of life satisfaction has been found among individuals who are residing in the rural area than those who are residing in the urban areas.

Ngamaba (2016) uses a multivariate analysis regression model to investigate the relationship between financial situation and life satisfaction. The author's finding indicates that a better financial situation may result in an enhancement in living conditions such as enhanced nutrition, quality of food, health status, also education opportunities. In India, Muhammad and Joy (2020) use the same method and their finding demonstrates that maintaining a good health status and household-related factors are controlled by financial status. Therefore, poor financial status is significantly negatively associated with life satisfaction.

However, George, Okun and Landerman (2014) also use the same technique to analyse the life satisfaction among youths in the context of South-Eastern United States. They find that the average income among those working adults aged between 25 and 44 years old could indirectly relate to their social activities, while the average income for those working adults aged 45-64 years old could indirectly relate to their health and leisure activities. In Karachi, Tariq (2015) finds a negative relationship between the financial situation and life satisfaction as he applies the correlation method. The author's finding implies that people who have higher income tend to seek for luxurious lifestyle. Therefore, they would have a higher expectation in their spending. This would

make them encounter financial stress, thereby automatically reducing their life satisfaction.

Medley (1980), Kapteyn et al. (2009), Howell et al. (2012), Daniel and Brown (2014), Ngamaba (2016), Jovanovic and Joshanloo (2019) and Muhammad and Joy (2022) posit that individuals' financial situation positively influences their life satisfaction. Those individuals who have financial stability could reduce their financial concerns. When they do not suffer from their financial stress, they would not reduce their daily needs or live frugally. As a result, they could enjoy better living conditions and this improves their life satisfaction. This fact prompts the following H₃.

H₃: *Better financial situation positively influences life satisfaction.*

Rossi and Bisconti (2007) hypothesize that resilience could act as a mediator in the financial situation and satisfaction of living in the United States. They use the analysis of variance to perform the hypothesis testing. Their results show that resilience could significantly mediate the relationship between financial situation and satisfaction of life. To survive, people who have resilience skills could find effective ways to improve their commitment in order to offset the financial stress that threatens their mental state. As a result, they

can maintain the low ratio of debt to income with financial stability in their lives.

In the United States, [Faircloth \(2017\)](#) uses the cross-sectional and correlation design to demonstrate that resilience could act as a mediator to link stressful life experience and well-being. The author suggests that resilient people could recover their financial problems by seeking for effective ways to overcome their financial problems. Consequently, they could enjoy financial stability and greater life satisfaction. [Salignac et al. \(2019\)](#) also imply that those with resilience skills would have better knowledge on financial-related matters in order to improve their financial situation from time to time. Better financial performance could increase the living conditions. With such advantages in life, they can achieve better life satisfaction.

[Rossi and Bisconti \(2007\)](#), [Faircloth \(2017\)](#) and [Salignac et al. \(2019\)](#) demonstrate that the financial situation is mediated by the resilience towards life satisfaction. Those individuals who are resilient tend to recover their financial problems from adverse events. They could find an effective and efficient way to obtain resources to be used for their investments in overcoming their financial adversity, thus improving their financial well-being and life satisfaction. As a result, people with resilience skill can maintain their financial stability, therefore enjoying greater life satisfaction. This leads to the following [H₄](#).

H₄: *Financial situation is mediated by resilience towards life satisfaction.*

2.1.3 The Influence of Physical Health Status on Life Satisfaction

In the context of Malaysia, [Swami et al. \(2007\)](#) examine the relationship between physical health status and life satisfaction. Their findings indicate that the stress leads to a low health status. Apart from this, medical expenses could contribute to financial problems, thereby reducing life satisfaction. In the context of Northern Italy, [Angelini et al. \(2014\)](#) use the robust unpacking effect. The authors' result shows that the life domain positively affects the satisfaction of life. People with good health status would have a better social lifestyle, thereby improving their life satisfaction level.

In the case of the United States, [Clement and Sauer \(2015\)](#) employ the adjusted multinomial logistic regression model to quantify the connection between life satisfaction and healthcare. Their findings indicate that the quality of perceived health is the most salient predictor of life satisfaction. People who have health problems tend to have lower satisfaction of life than those who do not have health problems. The reason to support their finding is lower work rate results in the poor performance of workers, and this ultimately affects the

quality of goods and services. Eventually, their life satisfaction would be negatively affected.

In the context of Australia, Middle East and North Africa, Asia, Eastern Europe and Former Soviet Union, Sub-Saharan Africa, Western Europe, North America, America, and Latin, [Ngamaba \(2016\)](#) performs the multivariate data analysis. The author's result indicates that health is positively associated with happiness of life, so broadly speaking, healthier people tend to have more satisfaction with their lives. Furthermore, in the case of Canada, [Hoskins and May \(2016\)](#) use the ordered logistic and generalized ordered logistic regression. Their results indicate that health status is essential for life satisfaction. People with good health status could contribute to higher gross domestic products, suggesting that healthier people could increase their productivity and consume more goods and services to maximize their utilities.

Additionally, [Thelma \(2017\)](#) demonstrates that regular exercise can help avoid depression and anxiety and improve sleep, reduce mental disorders and stress. This subsequently improves their overall life satisfaction level. [Goel et al. \(2018\)](#) conduct an adjusted multinomial logistic regression model, and the result shows that health is positively related to life satisfaction. Their finding implies that those people who suffer from stress and depression tend to undertake risky behaviour by consuming excess alcohol. Hence, their life satisfaction decreases as well. As a result, those dissatisfied in life may live in poor socioeconomic conditions and have poor health status. Also, [Pan et al.](#)

(2019) state that individuals who have a relatively good physical health status are more likely to live independently and perform well in basic or instrumental activities when dealing with their daily living tasks.

According to Jovanovic and Joshanloo (2019), billions of people around the globe are suffering from chronic illnesses. For those individuals who appear to suffer from their chronic illnesses, they do not seem to be able to enjoy their lives when it comes to performing certain jobs. Wang, Liu, Pu, Li, Guo, Feng, Huang, Ghose, Ji and Tang (2020) state that the improved healthcare system could enhance health status. In the case of Guyana, they perform the multivariate analysis and find that 95.4% of the participants have greater life satisfaction.

Swami et al. (2007), Angeline et al. (2014), Clement and Sauer (2015), Hoskins and May (2016), Ngamaba (2016), Goel et al. (2018), Pan, Chan, Xu and Yeung (2019), Jovanovic and Joshanloo (2019), and Wang et al. (2020) demonstrate that physical health status has a positive relationship with life satisfaction. The health status of the human is very important, as a poor healthy life can take a toll on your life satisfaction (happiness) and increase your stress levels. To conclude, better health status can improve the level of life satisfaction. This leads to the following H₅.

H₅: Better physical health status positively influences life satisfaction.

Next, [Liang, Wu, and Yang \(2016\)](#) find that those with good health status could have a relatively low depression rate and work productivity increase, which contributes to the satisfaction in their lives. In the context of China, [Shi et al. \(2015\)](#) perform the analysis by applying the hierarchical linear regression model. They find that resilience partially mediates the relationship between physical health status and life satisfaction. Their finding supports that resilience is one of the factors behind the enhancement of health awareness- it causes a quick response to cope with the stress, further leading to a good healthy life. [Yang, Xia, Han, and Liang \(2018\)](#) find that resilient people could control and maintain their health behaviour and lower their physical and mental health problems by solving difficult situations, thereby contributing to higher social support. [Yildirim \(2019\)](#) also finds that those with high resilience have a lower fear of happiness. All these benefits will enhance their life satisfaction levels. In short, [Kasiker and Peker \(2022\)](#) suggest that those with a higher level of resilience are more likely to experience fewer mental and physical health problems.

Several studies for instance, [Wang and Wang \(2014\)](#), [Xie and Deng \(2014\)](#), [Feng and Wan \(2016\)](#), [Yang et al. \(2018\)](#) and [Kasiker and Peker \(2022\)](#) demonstrate that physical health status is mediated by the resilience on life satisfaction. Higher resilience could reduce stress or emotion of life, thus maintaining the individual's health status and improving life satisfaction. This fact prompts the following H_6 .

H_6 : Health status is mediated by resilience towards life satisfaction.

2.1.4 The Influence of Educational Attainment on Life Satisfaction

With the application of the ANOVA method, [Flouri and Buchanan \(2003\)](#) demonstrate that educational attainment has a negative relationship with life satisfaction. Their finding implies that for the highly educated they usually could not meet their high expectations. Then, their high expectation would offset their psychological well-being. In the United States and Great Britain, [Fujita and Diener \(2005\)](#) find that educational attainment and life satisfaction are negatively related. Their finding implies that those educated retirees could not familiarise themselves with the life style of relaxing without any commitments where it can result in the low satisfaction in their lives. They prefer to have a competitive job market to show their market value whereas when they leave the workplace, they feel that they are losing the market value. [Collins, Sarkisian, and Winner \(2009\)](#) find that highly educated people would be more nervous, afraid, and aroused than those lower educated people due to the high expectations. Hence, it would negatively affect their life satisfaction. Also, [Hornsey et al. \(2018\)](#) state that high-educated employees and a high income do not report greater life satisfaction due to stressful competitive workplace.

In the case of India, [Daraei and Mohahery \(2012\)](#) conduct an ethnographic observation and in-depth interview in Mysore. Their finding shows that education is linked to life satisfaction because a good education

background has more employment options so people with this background tend to get well-paid jobs. Also, an educated person would have good habits and skills to maintain their life satisfaction. In Lagos, [Amaike \(2014\)](#) employs the multi-stage systematic sampling method to examine the retirees' education effect on the satisfaction of life. Their finding indicates that education and life satisfaction are significantly associated because retirees who are highly educated tend to have better life satisfaction and health status than those retirees who are not highly educated. In Malaysia, [Boo, Yen, and Lim \(2016\)](#) apply the ordered logit regression to demonstrate that those who have primary education have lesser life satisfaction than those who have tertiary education. A higher education level would allow individuals to have job opportunities and earn high income, leading to greater life satisfaction. Therefore, it can be pointed out that individuals could increase their life satisfaction through education ([Ngoo et al., 2020](#)).

In the context of Tehran, [Zanjani, Sadeghi, and Shojaeizadeh \(2017\)](#) perform the analysis of covariance and multivariate regression to investigate the influence of educational intervention on the life satisfaction of middle-aged women. Their results show that education intervention and life satisfaction are positively significant. With the increase in the level of education, the average happiness score would also increase. This finding is further supported by [Mowisch, Brose, and Schmiedek \(2020\)](#) who demonstrate that people with a higher level of education would feel less worried, sad, lonely and depressed in their daily lives as compared to those with a low level of education. [Dahiya and Rangnekar \(2020\)](#) and [Pollmann-Schult \(2021\)](#) demonstrate that employees

who have an academic background could predict labour market outcomes. Thus, the sufficient high level of income could make individuals no longer worry about their financial situations, resulting in their life satisfaction.

Daraei and Mohahery (2012), Amaike (2014), Boo et al. (2016), Zanjani et al.(2017), Ngoo et al. (2020), Mowisch et al. (2020), Dahiya and Rangnekar (2020) and Pollmann-Schult (2021) demonstrate that educational attainment has a positive relationship with life satisfaction. Based on these existing findings, they suggest that education could help someone access a job opportunity to obtain a better financial performance in satisfying their lives. This leads to the following H₇.

H₇: Higher educational attainment positively influences life satisfaction.

In the context of Africa, Hyman and Williams (2001) conduct bivariate analyses and their results show that resilience could mediate the relationship between education and life satisfaction. Their finding indicates that resilient students believe that they are capable of overcoming challenges. They tend to face their disappointment when they fail, so they have to cope with loss and adapt to change. This would subsequently increase their life satisfaction in the future. On top of that, Kjeldstadli, Tyssen, Finset and Hem (2006) and Ainize, Estibaliz and Oihane (2018) state that resilience skills provide knowledge to

those individuals who have depression and anxiety disorders that they have experienced in their studies. This consequently increases their job opportunities and advancement towards a better life satisfaction.

Furthermore, [Kilinc, Yildiz and Kavak \(2019\)](#) find that those people with high psychological resilience could deal with the stress to shape their life satisfaction by pursuing their higher education aspirations. As a result, those who have higher educational attainment can enjoy higher job opportunity and promotion, hence coming to greater level of life satisfaction in the future. [Hyman and Williams \(2001\)](#), [Kjeldstadli et al. \(2006\)](#) and [Ainize et al. \(2018\)](#) claim that individuals' educational attainment could be mediated by their resilience towards their life satisfaction. This consequently increases their job opportunities and advancements towards a better life. In other words, those people with high psychological resilience could deal with the stress to shape their life satisfaction by pursuing their higher education aspirations. This fact prompts the following [H₈](#).

H₈: Educational attainment is mediated by resilience towards life satisfaction.

2.1.5 The Influence of Employment Policy on Life Satisfaction

In the context of Lagos, [Amah \(2009\)](#) uses hierarchical multiple regression analyses to examine the relationship between human resource policies and life satisfaction. Their findings show that human resources policies would help employees balance their work and non-work involvements (such as family involvements), thus enhancing their overall life satisfaction ([Hoorn, 2009](#)).

In the case of Britain, [Whiteley, Clarke, Sanders, and Stewart \(2010\)](#) employ the individual-level and multi-level ordered logit models to analyse the role of domestic government in affecting life satisfaction. They find that political efficacy is the positive relationship that warrants the satisfaction of life. Their finding implies that the rise in personal economic evaluations could enhance the level of life satisfaction. Furthermore, [Carr and Chung \(2014\)](#) in their application of multilevel structural equation modelling, find that to increase individuals' employment policies, their income needs to be protected and the negative outcomes associated with feelings of employment insecurity need to be mitigated.

In the case of European countries, [Kasmaoui and Bourhaba \(2017\)](#) employ the system generalized method of moments. Their results show that public policy is significantly related to life satisfaction. Despite social and cultural factors, public policy can offer generous unemployment benefits,

progressive taxation and income equality that are altogether the predictors of the general well-being of individuals. For example, increasing employment rate would lead to individuals being able to afford their daily requirements, thereby enhancing their overall life satisfaction. Public policy can contribute to the building of infrastructure, establishment of a good education system and promotion of health care services which can increase the welfare of citizens' lives. [Ngoo et al. \(2020\)](#) state that government policies are concerned with the citizens' life satisfaction, as mass dissatisfaction is often the cause of political instability and regime change. Meanwhile, government make policy efforts to improve citizens' welfare and life satisfaction.

With the application of the system generalized method of moments in the context of Japan, [Knoll and Pitlik \(2014\)](#) find that public policy and satisfaction of life are not associated with each other. This finding is due to fact that the burden of high tax is harmful to all income groups not only for the top income group. In Asia, [Ngoo et al. \(2014\)](#) note that public policy does not associate with high life satisfaction. Their finding shows that public policy instability also would not contribute to the level of life satisfaction. In Malaysia, [Yiap and Geetha \(2017\)](#) perform the multiple regression analysis to demonstrate that government policy contributes to the least on individuals' well-being. Their finding indicates that although government policy may not directly affect one's well-being, these policies may still be detrimental in the results. For example, the government could promote job opportunities because many studies show that unemployment causes dissatisfaction in people's lives. The findings by [Lee and Lee \(2019\)](#) further show that public policy will not simply be changed

because of any individuals' policy action, therefore public policy and life satisfaction are deemed insignificant.

The majority of studies, like [Whiteley et al. \(2010\)](#) and [Kasmaoui and Bourhaba \(2017\)](#) demonstrate that public policy is positively related to life satisfaction. The public policy plays an integral role which is to strengthen social solidarity; this can contribute to the high level of life satisfaction by building infrastructure, establishing a good education system, improving employment chances and promoting health care services. This fact leads to the following [H₉](#).

H₉: The implementation of employment policy positively influences life satisfaction.

In the context of England, [Mguni et al. \(2011\)](#) hypothesize that resilience could act as a mediator in the public policy and satisfaction of life. Their finding shows that resilient individuals tend to adapt to the public policies. Also, individuals could make daily sound decisions to enhance the satisfaction in their life. Policymakers may consume lesser time to implement new policies when residents have resiliency skills, further generating welfare in life. In the case of Liverpool, [Bennett \(2015\)](#) employs mixed methods and the results also show that resilience is mediated the relationship between public policy and life satisfaction. The author finds that those resilient individuals who have different perceptions could easily understand the implementation of government policies.

Mguni et al., (2011) and Bennett, (2015) imply that public policy is mediated by resilience towards life satisfaction. Resilient people can easily and quickly comprehend the policy or facilities imposed by government to stimulate and further resolve the economic problem. Eventually, they would improve their life satisfaction. This fact prompts the following H_{10} .

H_{10} : Employment policy is mediated by resilience towards life satisfaction.

Table 2.2: Summary of existing findings on life satisfaction

Authors (Year)	Methodology & Country	Findings
Financial Literacy and Life satisfaction		
Shim et al. (2009)	AMOS 6.0 South-western United States	-Financial knowledge can lead people budgeting and planning, managing money, may help them achieve overall life success.
Taft et al. (2013)	Correlation test, Independent two-sample test (T-distribution and regression)	-Financial literacy provides the background of successful participation in economic activities through increased savings, correct purchasing decisions, proper investing, asset management, employee insurance, debt, and credit management.
Ali et al. (2015)	Iran PLS-SEM	-Financial literacy can greater life satisfaction. -it manages and plans their financial activities well ahead because people will face many different financial commitments at certain points in their lives.
Yap et al. (2016)	Malaysia Multiple regression analysis	-Financial literacy becomes the main controller as a person knows every detail regarding financial stuff.
Barand & Imanian (2017)	Kelurahan Sepanjang Jaya, Bekasi Classified-randomized method	- Financial knowledge would well manage finance and meet the goals and needs or a way to reach greater life satisfaction.
Hassibuan & Lubis (2017)	Tehran, Iran Multiple regression analysis	-Excellent financial literacy can help them determine accurate decisions, determine financial management, and good financial behaviour to help them be fair.
Ilies et al. (2019)	Indonesia SPSS 24.0 Netherlands	-Financial literacy influences financial behaviour and predicts financial performance, thereby improving life satisfaction.
Han & Kim (2021)	Amos South Korea	-Financial literacy could help workers with disabilities in accumulate assets for their future development. -the assets enhance the life satisfaction of workers with disabilities.

Table 2.2: Continued

Financial Literacy, Resilience, and Life Satisfaction		
Cohn et al. (2009)	Computer-validated diary data	- Resilient people more satisfied because they feel better as they would use their ability to develop financial resources for living well.
Richards (2014)	America Latent class analysis and multilevel model	- People who have resilience resource which can gain from doing well financially.
Muir et al. (2016)	United State Multi-dimensional framework	-Resilience skill as the ability to access or control their financial literacy and draw on internal capabilities and appropriate, acceptable and accessible external resources and support in times of financial adversity.
Maison (2019)	Australia Qualitative	-Improving people's resilience can address financial instability through higher financial literacy.
Jayasinghe, et al. (2020)	University of Warsaw Ordered logit model	-People without resilience behaviour could be running out of money for living expenses, facing problems accessing financial services, and decreasing overall life satisfaction.
	Australia	
Financial situation and life satisfaction		
Kapteyn et al. (2009)	Econometric model	-People who have a high income would maximize their utility to satisfy their life.
Howell et al. (2012)	Netherland United States World Values Survey	-An increase in education level would provide job opportunities to improve their financial satisfaction and indirectly contribute to improving their life satisfaction.
George et al. (2014)	Malaysia multivariate analysis regression model	-Average incomes among those working adults who are 25-44 years old could indirectly relate to their social activities, whereas average payments for those working adults are 45-64 years old could indirectly connect with health and leisure activities.
Tariq (2015)	South-Eastern United States Correlation method	-People who have higher income tend to seek a luxury lifestyle.
Daniel & Brown (2016)	Karachi Fixed effects ordered logit model	-When people suffering from financial concern, they are likely to reduce their daily needs-
	West and East Germany	

Table 2.2: Continued

Ngamaba (2016)	multivariate analysis regression model	Rwanda	-Better financial satisfaction may enhance living conditions such as improved nutrition, quality of food, good health status, and higher education opportunities.
Jovanovic & Joshanloo (2019)	regression analysis	Sebia	-The poor financial situation was less satisfies in their life due to the high cost of living in a large city
Muhammad & Joy (2022)	Descriptive statistics and bivariate analysis	India	-Poor childhood financial status controlling for various individual, such as health, household-related factors significantly negative associated with life satisfaction.
Tavares (2022)	Ordered logistic regression	Portugal	-Income increases contributes to improving their life satisfaction through health, education, personal-related and household-related factors.
Financial situation, resilience, and life satisfaction			
Rossi & Bisconti (2007)	Analysis of variance	United States	- Resilient persons may choose effective ways to cope with their stress.
Faircloth (2017)	Cross-sectional and Correlation design	Georgia, United State	-Those people who are resilient could seek an effective and efficient way to obtain resources to be used for their investments in overcoming their financial adversity, thus improving their financial well-being and life satisfaction.
Salignac et al. (2019)	Linear regression model		-Resilient people can help them determine where resources can and should be invested to cope with financial adversity, ultimately improving their financial situation and life satisfaction.
Physical health status and life satisfaction			
Swami et al. (2007)	Correlational and Mediation Analyses (Amos)	Australia	-Promoting healthy psychological well-being could solve depression, which is parallel with attempts to improve life satisfaction and reduce social isolation.
Angelini et al. (2014)	Econometric analysis	Malaysia	-People in good health would frequent contacts with their friends. As a consequence, a better social life can contribute to greater life satisfaction.
Clement & Sauer (2015)	Multivariate Regression Analysis	Northern Italy	- People who have mental health problems tend to have lower life satisfaction.
Ngamaba (2016)	Multilevel Analysis	United States	- Good health is associated with greater well-being, while setbacks in health have adverse effects on life satisfaction.
		Middle East and North Africa, Eastern Europe and Former Soviet Union, Western Europe, Latin America, North America, Sub-Saharan Africa, Asia, and Australia	

Table 2.2: Continued

Hoskins & May (2016)	Ordinal Regression Method Canada	-People in good health status can contribute to higher GDP as people more focus on the production of goods and services and consume more goods and services to maximize their utilities.
Thelma (2017)	SPSS Iceland	- People who have good physical health status can improve sleep, reduce mental disorders, and reduce stress.
Goel et al. (2018)	Adjusted Multinomial Logistic Regression Model Canada	- Being less satisfied with life may result in people being more likely to undertake risky behaviours such as smoking and excess alcohol consumption. As a result, those dissatisfied in life may be living in poor socioeconomic conditions and resulted in poor health outcomes.
Pan et al. (2019)	Hierarchical Multiple Linear Regression Model Fangshan, Beijing	-Good physical health status can lower the risk of disease and higher functional level, which can contribute to greater life satisfaction.
Jovanovic & Joshanloo (2019)	Anovas analysis Serbia	-Health problems and higher levels of negative emotions can lower financial satisfaction (lower productivity) and thus decrease their life satisfaction.
Wang et al. (2020)	Multivariate analysis Guyana	-An improvement in the healthcare system could improve health status, and nearly all participants (95.4%) expect to have better life satisfaction.
Tavares (2022)	Ordered logistic regression Portugal	- Good self-assessed health drives life satisfaction, meaning that as the health conditions improves, so does life satisfaction.
Physical health status, resilience and life satisfaction		
Shi et al. (2015)	Hierarchical linear regression model Liaoning province, China	- Higher scores on physical health problems are negatively associated with lower scores on resilience, resulting in lower life satisfaction levels.
Liang et al. (2016)	SPSS Guangdong University of Foreign Studies	-Resilience as an important psychological quality of individuals, which can guiding role in individuals' life satisfaction.
Guo (2017)	SPSS and Amos Guangdong	- College students do not have good resilience behaviour, they cannot adapt well when facing difficulties and pressure.
Yang et al. (2018)	Initial correlational analysis and Multiple mediation model China	-Resilient people can maintain physical and mental health by alleviating the negative consequences of difficult situations and contributing to higher social support.
Yildirim (2019)	Hierarchical regression analysis United Kingdom	-Individuals with higher levels of resilience are more likely to experience less mental and physical health problems.
Kasiker & Peker (2022)	Structural Equation Model (SEM) Amos	-The protective character of psychological resilience can better enable individuals to protect themselves and increase their happiness levels when faced with negative experiences.

Table 2.2: Continued

Educational attainment and life satisfaction		
Flouri & Buchanan (2003)	ANOVA British	- Those high educated people usually could not meet their high expectations. Then, their high expectation would offset the psychological well-being.
Fujita & Diener (2005)	Great Britain	- Those educated retirees who could not familiarise the lifestyle of relaxing without any commitments are likely to have low satisfaction in their lives. They prefer to have a competitive job market to show their market value, whereas when they leave the workplace, they feel no market value.
Collins, Sarkisian, & Winner (2009)	Hierarchical linear modelling	-Higher educated people would feel more nervous, afraid, and aroused compared to those lower educated people.
Daraei & Mohahery (2012)	ethnographic observation and in-depth interview	- A good education background would have good habits and skills to maintain or improve life satisfaction.
Amaike (2014)	Mysore, India Multi-stage systematic sampling method Lagos	-Education and satisfaction of life are significantly associated because retirees who are high school level (degree) reported better life satisfaction and health status than retirees who are primary or secondary school.
Boo et al. (2016)	Ordered logit regression	- A higher education level would allow someone to have job opportunities to earn high incomes to satisfy their life.
Zanjani et al. (2017)	Malaysia Analysis of covariance and multivariate regression	- With the increase in the level of education, the average score of happiness score would also increase.
Hoensey et al. (2018)	Tehran Inner Test Australia, Chile, China, Hongkong, India, Japan, Peru, Russia, and United States	-People who are most successful in education and people with a high income do not report the highest amount of life satisfaction
Ngoo et al. (2020)	Quantile regression analysis	-Higher education enhances the opportunities of getting better jobs, secure a better future.
Dahiya & Rangnekar (2020)	Asia T-test and ANOVA Indian	-More educated an employee is higher the perception of life satisfaction. Furthermore, the perceptions of life satisfaction increase with higher income level.
Mowisch et al. (2020)	Multilevel Structural Analyses	-People with a higher level of education felt less sad and worried and less lonely and bored in everyday life than people with a low level of education.

Table 2.2: Continued

Pollmann-Schult (2021)	Ordered logit, ordinary least squares (OLS) regression)	-Educational attainment strong predicts later labour market outcomes. Hence, financial stability could improve level of life satisfaction.
	German	
Educational attainment, resilience and life satisfaction		
Hyman & Williams (2001)	Bivariate analyses	-Students become resilient when they believe that they are worthy and capable of overcoming challenges. They tend to face their disappointment to learn failure, thereby coping with loss and adapting to change.
	Affilia	
Kjeldstadli et al. (2006)	Analysis of variance and logistic regression	-A medical student with fewer resilience skills to encounter education stress therefore reported less life satisfaction.
	Norwegian Universities	
Akbar et al. (2014)	SPSS	-When educated people have high expectation, then the high expectation will be offset by their life satisfaction. Therefore, resilient people can cope with life adversity.
	Multan	
Ainize et al. (2018)	Structural equation modeling	-Improving resilience skills could prevent students' from suffering stress in higher education. Thereby, contributing life satisfaction.
	United States and the Basque Country	
Kilinc et al. (2019)	Analysis of variance and analysis of regression	- Resilient people can cope with education stress and thus increase graduation rate and high life satisfaction.
	Turkey	
Employment policy and life satisfaction		
Amah (2009)	Hierarchical multiple regression analyses	-Human resources policies would help employees to balance their work and non-work involvements (family involvements), thus to enhance their overall life satisfaction.
Hoon (2009)	Lagos, Nigeria Reliability and validity analysis	- Well-being as a policy goal complement existing measures of well-being as a measuring rod in cost-benefit analyses and the use of well-being in the construction of poverty statistics equivalence scales.
	European	
Whiteley et al. (2010)	individual-level and multi-level ordered logit model	-Political efficacy is the positive relationship to the satisfaction of life. Rising in personal economic evaluations could enhance the level of life satisfaction.
	Britain	
Carr & Chung (2014)	multilevel structural equation modelling (MSEM)	-To increase individuals' employment policies (human resources policies) in order to protect their income and reduce the negative outcomes associated with feelings of employment insecurity.
	Europe	

Knoll & Pitlik (2014)	generalized method of moments (GMM)		- The burden of high tax is harmful to all income groups not only for the top income group.
	Japan		
Ngoo et al. (2014)	Econometrics model		- Policy instability also would contribute to a low level of life satisfaction.
	Asia		
Kasmaoui & Bourhaba (2017)	generalized method of moments (GMM)		-Public spending plays an essential character in the regulation of the malfunction of the market. It is a way to strengthen social solidarity and increase the level of happiness and quality of life by building infrastructure, establishing a sound education system, or promoting health care services.
	Europe countries		
Yiap & Geetha (2017)	Multiple regression test		-Although government policy may not directly affect well-being, these intervention policies still may affect well-being in the results. For example, the government could promote job opportunities because many studies show that unemployment causes dissatisfaction with their lives.
	Malaysia		
Lee & Lee (2019)	Confirmatory factor analysis		-Public policy does not associate with high life satisfaction. The public policy won't be changed or any action, just because of any individuals' policy action. Therefore public policy and life satisfaction are insignificant.
	United States and South Korea		
Ngoo et al. (2020)	Quantiles Regressions Analysis		-Government policies are concerned with the citizens' life satisfaction, as mass dissatisfaction is often the cause of political instability and regime change. While the government is making policy efforts to improve citizens' welfare, then their life satisfaction would be improved.
	Asia		
Employment policy, resilience and life satisfaction			
Mguni et al. (2011)	Ordinary Squares	Least	-Resilient residents easily understand and have different perceptions of government policy to stimulate the credit crunch and economic downturn.
Bennett (2015)	Mixed systematic	methods	-Policymakers may consume less time to implement new policies when residents have resiliency skills since resilient people have different perceptions and quickly understand government policy implementation.
	Liverpool		
Capano & Woo (2017)	Qualitative		-Resilience does not mediate the relationship between public policy and life satisfaction. Policymakers focus on robustness instead of resilience. As robustness allows governments' direct control of the policy process.
	New York		

2.2 Conceptual Framework

Based on the existing literature, this study develops a conceptual framework. Conceptual framework is generally developed based on the literature review of past studies and theories about the study, which forms a visual representation of the relationships between dependent and independent variables (Swaen, 2015). This study incorporates resilience as an indispensable part of life satisfaction that plays the role of mediator. Working adults with high resilience are normally able to cope with the adversities and develop resources for them to live well. Therefore, this study adapts the bottom-up theory in developing the framework with some modification to achieve the objectives of the study. To improve the existing framework, this study attempts to consider resilience in mediating the relationship between financial literacy, financial situation, physical health status, educational attainment and employment policy toward life satisfaction. The conceptual framework is shown in Figure 2.2.

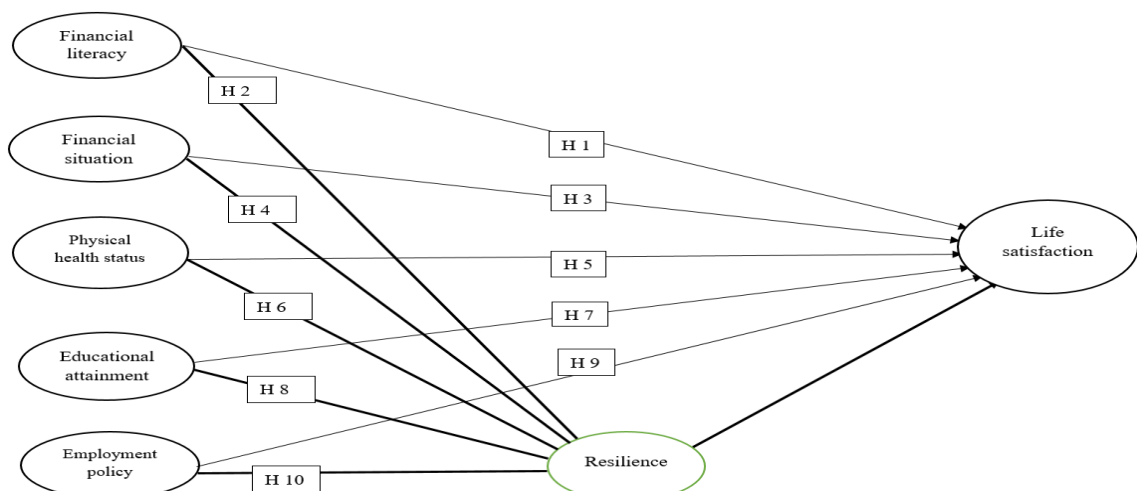


Figure 2.2: Conceptual framework of the determinants of life satisfaction.
Source: Developed for study

As shown in [Figure 2.2](#), hypotheses are developed according to two aspects. The first aspect is to detect the direct effects of financial literacy, public policy, financial situation, educational attainment and physical health status on life satisfaction. These hypotheses are [H₁](#), [H₃](#), [H₅](#), [H₇](#) and [H₉](#). Then, it is followed by the second aspect that detects the indirect effects of these determinants on life satisfaction through resilience. The hypotheses include [H₂](#), [H₄](#), [H₆](#), [H₈](#) and [H₁₀](#).

2.3 Definitions of Constructs

The definitions for all constructs in the framework are given in [Table 2.2](#).

Table 2.2: Definitions of constructs

Source: Developed for the study.

Life satisfaction	An individual's evaluation of his or her life as a whole. Life satisfaction is more subjective which can be affected by how he or she feels on a particular day. Life satisfaction is also used to show their feelings (moods), emotions, and how they feel about their directions and options for the future (Sumner, 1966).
Financial literacy	Financial literacy is the financial knowledge and understanding how the money is spent, made, and saved. An individual has financial literacy which is the skills and ability to use the financial resource to make financial decision correctly, such as how to generate, invest, save and spend money (Huston, 2010).
Employment policy	Employment policies are descriptions of how all employees, regardless of job description or title, are expected to conduct themselves. This policy is typically developed by a company's human resources (HR) department and distributed to all employees in the form of a handbook. Employees can use this handbook as a reference, as well as guidelines on management, employment, vacation and sick time, compensation, benefits, working time, contract or understanding between the company or any affiliate and any employee (Law Insider, 2013).

Education attainment	Educational attainment refers to the degree or level of completed academic of a person. Successful completion of a level of education refers to the achievement of the learning objectives of that level, typically validated through the assessment of acquired knowledge, skills and competencies (Statistics Canada, 2016).
Physical Health status	Health status refers to the health (good or poor) of a person. It encompasses issues linked to living with diabetes such as blood, glucose, blood pressure levels, body weight, thus it affects people quality of life (Farlex, 2012).
Financial situation	Financial situation is about how satisfied we are with our own financial needs such as the amount of savings you have, how much you are setting away for retirement and how much of your income you are spending on fixed or non-discretionary expenses (Goldman, 2014).
Resilience	Resilience is about individual's ability to view a stressful or adverse experience in a positive light (Kobasa, 1979), tolerate negative affect (Lyons, 1991), strive toward personal goals (Rutter, 1985), and generate optimism (Connor & Davadson, 2003).

2.4 Literature Gap

This study intends to fulfil the literature gap by applying the bottom-up theory to explore the mediating effect of resilience on the determinants toward life satisfaction among working adults in the metropolitan area. In the context of Malaysia, the WPKL is a place that provides individuals with stress and high cost of living. Thus, the study is expected to provide findings that contribute to the new knowledge on improving the bottom-up theory by adding resilience as a mediator. Also, the findings could demonstrate the importance of developing the resilience skill in order to cope with the challenges in the stressful workplace. Although some researchers place an emphasis on the influence of financial literacy in examining life satisfaction in the context of European

countries, most of them are found to have overlooked the importance of financial literacy for individuals in the metropolitan area.

As shown in [Table 2.4](#), most existing studies on life satisfaction are conducted in the Western countries. However, there is the literature that focuses on individuals residing in the metropolitan areas in Asia has been limited. The growing interest surrounding the targeted area is not surprising, given the increase of mental illness cases, such as stress and depression, and added to this, the high cost of living.

Table 2.4: Articles included in the sample according to different continents

References	
Swami et al. (2007); Daraei & Mohahery (2012); Howell et al. (2012); Knoll & Pitlik (2014); Ali et al. (2015); Shi et al. (2015); Liang et al. (2016); Boo et al. (2016); Hassibuan & Lubis (2017); Yiap & Geetha (2017); Guo (2017); Yang et al. (2018); Pan et al. (2019); Dahiya & Rangnekar (2020); Khuong et al. (2020); Huang et al. (2020); Shamsul et al. (2021); Khalid (2021); Han & Kim (2021); Muhammad & Joy (2022)	Asia
Rossi & Bisconti (2007); Amah (2009); Hoorn (2009); Cohn et al. (2009); Shim et al. (2009); Kapteyn et al. (2009); Whiteley et al. (2010); Mguni et al. (2011); Taft et al. (2013); Carr & Chung (2014); Richards (2014); Amaike (2014); George et al. (2014); Clement & Sauer (2015); Daniel & Brown (2016); Muir et al. (2016); Hoskins & May (2016); Kasmaoui & Bourhaba (2017); Faircloth (2017); Capano & Woo (2017); Barand & Imanian (2017); Hoensey et al. (2018); Ainize et al. (2018); Goel et al. (2018); Yildirim (2019); Lee & Lee (2019); Salignac et al. (2019); Jovanovic & Joshanloo (2019); Jayasinghe, et al. (2020); Wang et al. (2020); Pollmann-Schult (2021); Mowisch et al. (2021); Tavares (2022)	Western Countries: European, North America and South American

Sources: Candidate's compilation.

As shown in [Table 2.5](#), most existing studies often do not specifically narrow the range of adults' age group in examining their life satisfaction. According to [National Health and Morbidity Survey \(2019\)](#), adults who are

aged between 20 and 39 years old are often quickly and easily depressed in their daily life as compared to other age groups. Therefore, this study narrows the range of age of the respondents, that is between 20 and 39 years old.

Table 2.5: Articles included in the sample according to different age groups

References	
Jayasinghe et al. (2020)	15 and above
Han & Kim (2021)	15-64
Pollmann-Schult (2021)	16 and 17
Kasiker & Peker (2022)	18-21
Ainize et al. (2018)	18-45
Khalid (2021)	18-47
Yildirim (2019)	18-62
Ng et al. (2020)	21 and above
Sang & Joshanloo (2019)	25 and above
Ngoo et al. (2020)	30-69
Muhammad & Joy (2022)	45 and above
Kilinc et al. (2019)	46-99
Shamsul et al. (2021)	60-74
Jovanovic & Joshanloo (2019)	63 and above
Tavares (2022)	70 and above

Sources: Candidate's compilation.

CHAPTER 3: RESEARCH METHODOLOGY

3.0 Overview

This chapter provides the discussion on the use of the data and methodology in the study. This chapter consists of several sub-sections that touch on research design, sampling, data collection, research instrument, pre-test and pilot study, and data analysis methods.

3.1 Research Design

This study adopts quantitative design method with cross-sectional data as the methodology of this study. Quantitative research is more scientific ([Johnson & Christensen, 2008](#)), objective ([Formplus, 2021](#)), and reliable in terms of the prediction of effect and cause ([Apuke, 2017](#); [Bhandari, 2020](#)). On top of that, this study utilizes SMARTPLS 3.0 based on PLS-SEM analysis to perform the analysis in investigating the direct and mediating effect on the determinants toward life satisfaction. A 6-point Likert scale is used to measure responses for each item in the designed questionnaire. All items are provided for the constructs, including life satisfaction, financial literacy, employment policy,

financial situation, physical health status, and educational attainment and resilience.

3.2 Population and Sample

3.2.1 Targeted Respondents

The targeted respondents are those who are selected to be a representative group from the population in the study. The working adults in the WPKL aged 20 to 39 years old are our study's targeted respondents. The reason for choosing the age group of 20-39 years old is that adults of this age group tend to quickly and easily get depressed as compared to other age groups ([National Health and Morbidity Survey, 2019](#)).

Next, those people starting from 20 years old are more likely to involve in adopting a risk-taking behaviour because they think themselves as invulnerable ([Kipke, 1999](#)). Therefore, young employees have the high chance to become stressed and to experience bankruptcy compared to other age groups. On top of that, most Malaysians under 40 years old are declared bankrupt due to the high cost of borrowings, credit card debt and loans, and personal loans

(Federation of Malaysian Consumers Association Report, 2011; Asian Institute of Finance, 2015).

Besides, the sampling location of this study is at KLCC. In 2018, this targeted area was resided by approximately 1.8 million people (Department of Statistics Malaysia, 2018). Also, it is the capital, principal economic and political centre of Malaysia (Department of Statistics Malaysia, 2018). In 2015, the depression rate of 39.8% was found to be the highest in WPKL (National Health and Morbidity Survey, 2015). In 2019, the depression rate was not recorded to be the highest, but the growth rate of consumer price index in 2019 was recorded to be the highest at 1.2% covering 5.7% increase in prices of food and non-alcoholic beverages. As shown in Table 1.1, 1.2, 1.3, and 1.5, this targeted area is also recorded to have the highest cost of living index of 93 (Expatistan, 2022) and the highest (2.66%) of bankruptcy cases (Malaysian Department of Insolvency, 2019), Therefore, the WPKL is the most preferred town to be chosen as the study location.

Table 3.1: Depression rate by age group

	Percentage (%)
20-24	$\frac{89345}{472420} = 18.91\%$
25-29	$\frac{118087}{472420} = 25\%$
30-34	$\frac{47340}{472420} = 10\%$
35-39	$\frac{42592}{472420} = 9.02\%$

Source: National Health and Morbidity Survey (2019)

3.2.2 Sampling Size

The sample size is the number of people extracted from a population to be involved in a survey or experiment. This study uses three methods to identify the minimum required sample size of the study, such as Krejcie and Morgan, sample size calculator for CheckMarket, and GPower version 3.1 software. The first determination of sample size method is Krejcie and Morgan (Krejcie & Morgan, 1970). Krejcie and Morgan developed a table for determining the sample size for a given population. As shown in Table 3.2, the total population of working adults who are 20 to 39 years old in WPKL is 49,4600. Based on Krejcie and Morgan's table, when the population is 75,000 and above, the sample size is fixed at 384. As a result, the study's minimum required sample size would be 384, as shown in Figure 3.2.

Table 3.2: Employed persons by age group in Wilayah Persekutuan Kuala Lumpur, 2018

	Populations ('000)
20-24	70.3
25-29	142.1
30-34	149.2
35-39	133
Total population	494.6

Source: Department of Statistic, Malaysia (2018)

The second determination is the sample size calculator for Checkmarket (2019). This sample size calculator is used to determine the number of respondents needed in a survey. As shown in Table 3.3, the calculator registers

the population size (how many populations are targeted in the state/city/country), the margin of error of 5% and confidence level of 95%. In short, [Table 3.4](#) shows that the minimum required sample size should be 384 observations.

Table 3.3: Calculate sample size of margin of error

Population Size	494600
Number of respondents	384
Confidence level	95%
Margin of Error	5%

Source: [Checkmarket \(2019\)](#)

Table 3.4: Minimum required sample size calculator

Population Size	494600
Margin of error	5%
Confidence level	95%
Required sample size	384

Source: [Checkmarket \(2019\)](#)

Lastly, this study also suggests that GPower identifies the minimum required sample size of the study. The setting of GPower is followed by [Dattalo \(2008\)](#) with a beta of 0.80 and alpha of 0.05. The F-test set with linear multiple regression, includes the fixed model, R^2 deviation from zero, and seven predictors in the model. As shown in [Figure 3.1](#), the minimum required sample size of GPower is 151. As a result, this study would target at obtaining a minimum required sample size of 384, which is supported by [Krejcie and Morgan \(1970\)](#) and [Checkmarket \(2019\)](#).

Input Parameters		Output Parameters	
<input type="button" value="Determine =>"/>	Effect size f^2	Noncentrality parameter λ	15.1000000
	α err prob	Critical F	2.0741851
	Power ($1 - \beta$ err prob)	Numerator df	7
	Number of predictors	Denominator df	143
		Total sample size	151
		Actual power	0.8010496

Figure 3.1: GPower version 3.1 software

3.2.3 Sampling Technique

A sampling technique can be based on either probability or non-probability approach. Probability sampling is used when everyone has an equal chance to be randomly selected from the entire population's contact information list. In contrast, non-probability sampling is a sampling technique in which the researcher chooses samples based on the subjective judgment of the researcher rather than doing the random selection. Here, the non-probability sampling method is adopted due to the fact that all working adults in WPKL cannot be obtained completely from Dewan Bandaraya Kuala Lumpur.

Among the types of non-probability technique, a convenience sampling technique is selected to be used in this study. According to [Bhaskaran \(2020\)](#), convenience sampling is defined as a data collection method from a conveniently available pool of respondents. There are no specific criteria required to be part of this targeted respondents' sample. This sampling technique does not need to consider whether or not the respondents represent the entire population. Using this convenience sampling technique can help us observe viewpoints, opinions, and habits in the easiest possible manner. For

example, this study gives no restriction on the income level, marital status, and education level of working adults. This study only focuses on which determinants most affect the working adults in the WPKL.

3.3 Research Instrument

The self-administered questionnaire is developed for this study. The questionnaire consists of two sections: Section A and Section B. Section A touches on the respondents' demographics, including age group, education level, gender, monthly income, marital status, race, monthly expenses and monthly saving. This is followed by Section B that provides the list of statements for each construct, such as financial literacy, employment policy, financial situation, physical health status, educational attainment, resilience and life satisfaction.

In lieu of the 5-point Likert scale, this study uses the 6-point Likert scale with end-anchors labelled “*strongly agree*”, “*agree*”, “*slightly agree*”, “*slightly disagree*”, “*disagree*” and “*strongly disagree*” whereby constructing the items of each variable is supported by [Ryff and Keyes \(1995\)](#); [Chomeya \(2010\)](#); and [Abilitylab \(2013\)](#). The reason as to why this current study chooses 6-point Likert scale is that the scale can reflect upon the actual responses of the respondents ([Nor-Azzatunnisak, Roseliza-Murni, Manap, & Hoesni, 2017](#)). For

example, if any point of “neutral” is desired, the “slightly agree” and “slightly disagree” choices can be averaged together.

According to [Thompson \(2018\)](#), the 5-point Likert scale presents some problems such as it gives a chance for respondents to often pick the neutral option when they do not want to think too hard on the statement in the questionnaire. As a result, the collected data cannot reflect upon their actual responses. For the psychology test, the 6-point Likert scale tends to give the discrimination and reliability values which are higher than the 5-point Likert scale ([Chomeya, 2010](#)). After the development of the questionnaire, the pilot study is carried out to investigate the reliability and validity of the questionnaire. The items for each construct are as listed in [Table 3.5](#).

Table 3.5: The list of items for each construct

Financial literacy		
FL1	Johnson & Parrotta (2011)	I use credit card(s) to pay my loan(s).
FL2	Johnson & Parrotta (2011)	I apply the loan(s) to reduce my commitment(s).
FL3	Johnson & Parrotta (2011)	I allow my friend(s) to use my name to make purchase(s) of vehicle.
FL4	Johnson & Parrotta (2011)	I allow my friend(s) to use my name to make purchase(s) of property.
FL5	Campara et al. (2017)	I buy insurance to reduce my future uncertainty.
Employment policy		
PP1	Whiteley et al. (2010)	The implementation of Malaysia Employment Act would enhance my social network in career.
PP2	Whiteley et al. (2010)	The implementation of Malaysia Employment Act would enhance my welfare in working.
PP3	Subramaniam (2010)	The implementation of Malaysia Employment Act protects my job security.
PP4	Subramaniam (2010)	The implementation of Malaysia Employment Act would provide me flexible working hours.
PP5	Subramaniam (2010)	The implementation of Malaysia Employment Act would provide better working environment.
PP6	Subramaniam (2010)	The implementation of Malaysia Employment Act would enhance my productivity in career.
Financial situation		
FS1	Parrotta (1999)	I feel comfortable with my current salary.
FS2	Parrotta (1999)	I am able to encounter my financial problem(s).
FS3	Campara et al. (2017)	I have my retirement plan(s).

FS4	Campara et al. (2017)	I have regular saving(s).
FS5	Campara et al. (2017)	I am able to allocate my expenditure for my family matter(s).
FS6	Campara et al. (2017)	I am able to allocate my expenses for emergency purpose(s).
Physical health status		
HS1	Traina et al. (2015)	I have normal body weight.
HS2	Traina et al. (2015)	I have normal blood sugar level.
HS3	Traina et al. (2015)	I have normal blood pressure.
HS4	Traina et al. (2015)	I involve physical activities after working hours.
HS5	Traina et al. (2015)	I involve physical activities during the weekend.
Educational attainment		
EA1	Lam, et al. (2016)	The knowledge I learn from school can be apply in real life situation.
EA2	Lam, et al. (2016)	The person who has high education level would help to increase in the social networks.
EA3	Lam, et al. (2016)	The person who has high education level tends to meet his/her expected salary.
EA4	Lam, et al. (2016)	The person who has high education level would have a chance in getting a job.
EA5	Lam, et al. (2016)	The person who has high education level would have a chance in getting a job promotion.
Resilience		
RL1	Anne (2017)	I have confidence to carry out assigned task(s) by superior.
RL2	Anne (2017)	I always ready to overcome daily challenge(s).
RL3	Anne (2017)	I always show my optimism to others.
RL4	Anne (2017)	I consider the challenge(s) as opportunities to improve my problem-solving skills.
RL5	Nicholson (2018)	I am able to handle my stress in working.
Life satisfaction		
LS1	Folkman (1997)	I take longer time than usual to perform a task.
LS2	Hafekost et al. (2017)	I have high expectation in handling my daily task(s).
LS3	Neugarten et al. (1961)	I always have conflicts with my family member(s).
LS4	Neugarten et al. (1961)	I have a good relationship with my superior(s).
LS5	Neugarten et al. (1961)	I have a good relationship with my colleague(s).
LS6	Folkman (1997)	I feel uncomfortable when I am alone.
LS7	Folkman (1997)	I lost interest in my daily life.
LS8	Folkman (1997)	I have negative emotion in my daily life.
LS9	Neugarten et al. (1961)	I have sleepless night(s) when I encounter daily life challenge(s).

Source: Developed for study

3.4 Data Collection

Data collection is an important step to improve the accuracy or validity of the study findings or outcomes for the quantitative research process ([Sadan, 2017](#)).

It is a procedure of collecting primary data, measuring and collecting data, and

evaluate the outcome results ([Kabir, 2016](#); [Stellenbosch University Library, 2017](#)). The data collection was conducted in the Kuala Lumpur City Centre (KLCC) with a focus on a group of working adults. This is because KLCC is a gold standard business hub, part of the International Association Central City and also it offers convenient transportation. The questionnaire distribution time was from 8.30 am to 7.30 pm on weekdays, which was hoped to increase the working adults' response rate.

Before conducting the person-administered questionnaire, the ethical clearance form needs to be applied for the field trip to obtain the approval letter from the Faculty General Office in the university. Before the respondents respond to each statement in the questionnaire, a short briefing about the purpose and objective of the study would be given to them in ensuring that they understand the purpose of conducting the survey.

3.5 Pre-test and Pilot Study

Before analysing the small-scale study, the questionnaire needs to be checked by academic experts, and this is called a pre-test. Through the pre-test, irrelevant items or too many items inside the constructs can be identified and removed ([Hoskin, 2019](#)). Assistant Professor Dr. Teoh Sok Yee and assistant Professor Dr. Leong Lai Ying from Universiti Tunku Abdul Rahman were willing to

examine the content validity of the questionnaire. Their recommendations and suggestions are highly appreciated in improving the designed questionnaire to avoid confusion or misunderstanding among survey participants.

The first given recommendation is to remove some of the items, since too many items can lead to AVE having the value lesser than 0.7 and thus, the factor loadings would be lesser than 0.4. As a result, it would become biased. Their second recommendation is to remove and restructure some inadequate items. Meanwhile, academic experts in research methodology suggests recalculating the monthly salary, expenses, and savings because of inconsistent interval. Besides, she also proposes amending the occupation since it was confusing for the respondents to choose their career.

Next, the questionnaire is sent to two experts in qualitative research to ensure the clarity of the use of English language, vocabulary and sentence structures in presenting appropriate items. Hence, the respondents would easily understand and provide their high response during the actual survey.

After conducting pre-test, the pilot study is carried out on 30 respondents to investigate the questionnaire's instruments' reliability and validity before testing the full-scale research. Based on [Roscoe \(1975\)](#) on the rule of thumb for determining the pilot study's sample size, it declared that the minimum sample size should be 30 observations and appropriate for most of the studies. The 30-rule-of-thumb of the pilot study suggests for every situation ([Browne, 1995](#);

[Martinez & Abrain, 2007](#); [Machin, Camphell, Tan & Tan, 2018](#)). Since the use of 30 is commonplace to reduce the imprecision around the estimate of the standard deviation, the pilot study data is collected by distributing a questionnaire on 30 working adults in KLCC aged 20 to 39 years old.

Based on [Table 3.6](#), the pilot study results show that the eight items of FL1, FL2, PP5, FS3, RL4, LS1, LS7 and LS8 are removed because of the fact that the loading values are lower than the rule of thumb 0.4 ([Hair et. al, 2010](#)). Furthermore, 42 item loadings have fulfilled the requirements in which the loading values are above the required minimum of 0.4. From the reliability test, all of the constructs meet the high reliability of 0.8 and above ([Hair et. al, 2010](#)). Also, AVE's results show that the constructs meet the required minimum of 0.4 ([Fornell & Larcker, 1981](#); [Lam, 2012](#); [Huang, Wang, Wu, & Wang, 2013](#); [Muhamad & Nor-Azreen, 2016](#)). To conclude, there is reliability and validity among all of the constructs. This indicates that all items in the questionnaire are considered to be reliable in representing the constructs.

Table 3.6: Summary results of the pilot study

Construct	Items	Factor loading	CR	AVE
Financial Literacy	FL3	0.698	0.806	0.470
	FL4	0.406		
	FL5	0.692		
	FL6	0.782		
	FL7	0.683		
Employment Policy	PP1	0.926	0.900	0.605
	PP2	0.613		
	PP3	0.833		
	PP4	0.665		
	PP6	0.661		
Financial Situation	FS1	0.710	0.919	0.657
	FS2	0.752		
	FS4	0.701		
	FS5	0.830		
	FS6	0.889		
Educational Attainment	ED1	0.580	0.887	0.615
	ED2	0.801		
	ED3	0.849		
	ED4	0.823		
	ED5	0.837		
Physical Health Status	HS1	0.767	0.856	0.547
	HS2	0.810		
	HS3	0.813		
	HS4	0.636		
	HS5	0.654		
Resilience	RL1	0.866	0.935	0.742
	RL2	0.919		
	RL3	0.917		
	RL5	0.773		
	RL6	0.823		
Life Satisfaction	LS2	0.765	0.892	0.488
	LS3	0.894		
	LS4	0.715		
	LS5	0.519		
	LS6	0.672		
	LS9	0.500		
	LS10	0.751		
LS11	0.758			
	LS12	0.663		

Notes: CR denotes composite reliability; AVE denotes average variance extracted; * denotes removed.

Source: PLS-SEM software

3.6 Method of Data Analysis

After the data collection, PLS-SEM is performed by using SMARTPLS version 3.0 to investigate the data analysis rather than use AMOS to conduct this study. The reason is that PLS-SEM relies on a large number of items or constructs even with a small sample size (Garson, 2016), the range of sample size is at least 200-400 respondents for PLS-SEM (Kenny, 2012; Knock & Hadaya, 2018). The conceptual model for the proposed framework is constructed using the Smart PLS software (Gefen, Straub, & Boudreau, 2000). On top of that, this study places an emphasis on formative measurement models, therefore PLS-SEM is more suitable to conduct in this study (Petter, Straub, & Rai, 2007; Henseler, 2018; Benitez, Henseler, Castillo, & Schuberth, 2020). However, AMOS can be used when the model involves the reflective measurement and SMARTPLS version 3.0 can also be used to examine all the directions of relationship simultaneously which is the same as AMOS (Petter et al., 2007). In this study, PLS-SEM is used. In order to perform the descriptive analysis, the SPSS would be used to obtain respondents' demographic profile in terms of the percentage frequencies.

Next, the measurement model is evaluated in terms of convergent reliability and validity (factor loadings, composite reliability, average variance extracted, Fornell-Lacker, cross loading and Heterotrait-Monotrait ratio). Then, it is followed by inferential analysis (structural model) that tests the developed

research hypotheses in examining the direct and indirect effects of determinants on life satisfaction.

3.6.1 Descriptive Analysis

Descriptive analysis is an essential first step before conducting the statistical analyses which summarize data in a simple way (Lund Research Ltd, 2018). It can also have a role in data distribution and identify the outliers and double-check data entry errors. The present study analyses the respondents' demographic profile based on age, education level, gender, monthly income, marital status, race, monthly expenses, and monthly savings.

3.6.2 Reliability and Validity Analyses

Followed by the reliability analysis, it is a measurement technique that allows researchers to ensure that the measures are stable and consistent over time. There is also the consistency across items on the scale and the term used is *reliable*. Otherwise, the items are not a reliable measure of the construct. Next, the SMARTPLS version 3.0 would be carried out to test the internal reliability and consistency among constructs. The value is ranged between 0 and 1, where

the approximated value to one indicates a higher reliability level. The minimum requirements of the value of composite reliability values are between 0.6 and 0.95 in order to achieve the satisfactory level of the internal consistency reliability (Fornell & Larcker, 1981; Nunnally & Bernstein, 1994; Hair, Hult, Ringle, & Sarstedt, 2014; Hamid, 2017).

Besides that, Average Variance Extracted (AVE) would be used to analyse the validity of the constructs. The AVE value should exceed 0.5 so that it is adequate for convergent validity. However, some of the researchers claim that if the AVE value is 0.4 but the composite reliability is higher than 0.6, the convergent validity of the construct is still considered as adequate (Fornell & Larcker, 1981; Lam, 2012; Huang, Wang, Wu, & Wang, 2013; Muhamad & Nor-Azreen, 2016). Otherwise, the items should be removed. The criteria of the reliability test are summarized in Table 3.7.

Table 3.7: Criterion of the reliability analysis

	Criterion
Factor Loadings	The value of the loading is from 0.4 to 0.7 above. Otherwise, items should be removed (Hulland, 1999; Henseler, Ringle & Sinkovics, 2009; Nascimento & Macedo, 2016).
Composite Reliability	The values of composite reliability between 0.6 and 0.95. Otherwise, it indicates a lack of reliability and should be removed (Fornell & Larcker, 1981; Nunnally & Bernstein, 1994; Hair, Hult, Ringle, & Sarstedt, 2014; Hamid, 2017).
Convergent Validity- Average Variance Extracted (AVE)	AVE value should exceed 0.4 and above. Otherwise, the items should be removed (Fornell & Larcker, 1981; Lam, 2012; Huang, Wang, Wu, & Wang, 2013; Muhamad & Nor-Azreen, 2016).

Source: Hair, Hult, Ringle, & Sarstedt (2014)

After confirming the reliability among all the constructs, discriminant validity is performed. Discriminant validity measures the degree of differences between the overlapping construct. To achieve the discriminant validity, there are three tests to be carried out such as cross loading, Fornell-Larcker and Heterotrait-monotrait (HTMT) ratio. For the first criteria, the factor loading analysis is performed to meet the requirement of the minimum value of 0.7 (Henseler, Ringle & Sinkovics, 2009; Gotz, Lehr-Gobbers & Krafft, 2010; Olalera, 2013). While some of the authors state that the minimum loading value of 0.4 is acceptable, otherwise, the items should be removed. (Hair, William, Barry, & Anderson, 2010).

For the second criterion of the discriminant validity, the analysis of Fornell-Larcker requires the value of square root of AVE for each construct to be greater than the correlations with other latent constructs. Lastly, the HTMT ratio is emphasized to achieve higher specificity, sensitivity rates (97% - 99%) and perform better in the discriminant validity as compared to cross loading (0%) and Fornell-Larcker (20.82%) (Kline, 2011). The value of HTMT close to 1 indicates a lack of discriminant validity. Some authors suggest that the value lower than 0.85 and 0.9 is considered to meet the discriminant validity among all constructs (Kline, 2011; Gold & Arvind, 2001). The criterion of discriminant validity is summarized in the following [Table 3.8](#).

Table 3.8: Criterion of discriminant validity

	Criterion
Cross loading	The values of cross loading for all items under constructs are greater than all other non-target constructs which means there is discriminant validity between all of the constructs.
Fornell-Lacker	The square root of each construct's AVE should have a greater value than the correlations with other latent constructs in order to achieve discriminant validity between all the constructs.
HTMT ratio	The value of HTMT should be lower than 0.85 or 0.9 in order to meet discriminant validity between all variables. However, the result of HTMT values close to 1 indicates a lack of discriminant validity.

Source: Developed for study

3.6.3 Measurement Model

While confirming the reliability and validity among all the constructs, the bootstrapping test would be carried out to perform the analysis through the application of SMARTPLS version 3.0. This measurement model consists of seven constructs, namely financial literacy, financial situation, employment policy, physical health status, educational attainment, resilience and life satisfaction. Next, a mediation analysis is used to investigate the mediation effect of resilience on the determinants toward working adults' life satisfaction. The significant level of this study is 0.05 ($\alpha = 0.05$). Furthermore, there is a total of ten hypotheses that are supported if the p-value of the variables is lower than 0.05. Otherwise, the hypotheses are not supported.

3.6.4 Structural Model

After checking the direct effect, the PLS-SEM analysis would also be carried out to test the mediation causal relationships between the dependent and independent variables. In analysing this mediation causal relationships, Variance Accounted For (VAF) is used by dividing the total coefficient effect with the coefficient of the indirect effect of the variables (Hair et al., 2017).

The value of VAF that is lower than 0.2 indicates that the variable does not mediate the relationship between the dependent variable and independent variables. If the VAF value is between 0.2 and 0.8, the variable is considered to partially mediate the relationship between the dependent variable and independent variables. In short, the greater VAF value than 0.8 indicates that the variable fully mediates the relationship between the dependent and independent variables. Next, in one case, the value of VAF can be greater than one when the total effect is smaller than the indirect effect (Shrout & Bolger, 2002). In another case, the VAF value can be negative or infinity. This indicates the inconsistent mediation or suppressor effect (Hayes, 2009; MacKinnon, Krull, & Lockwood, 2010). The level of VAF is summarized in Table 3.9.

Table 3.9: Variance accounted for

	Level of the Mediation
<0.2	No mediation effect on the relationship between the independent and dependent variables.
0.2-0.8	Partial mediation effect on the relationship between the independent and dependent variables.
>0.8	Fully mediation effect on the relationship between the independent and dependent variables.

Source: Developed for study

3.7 Conclusion

In this chapter, the use of research methodology in this study is explained. This study uses the collected data from a self-administrated questionnaire. After that, the pilot and full-scale study would be carried out to test the reliability and validity. Finally, the bootstrapping test is performed to detect the significant relationship among variables.

CHAPTER 4: RESULTS AND DISCUSSIONS

4.0 Overview

This chapter uses statistical procedures to investigate the collected data. Firstly, the demographic profile would be carried out, followed by the measurement model (convergent reliability and validity and discriminant validity), and structural model (direct and indirect effect). Lastly, the discussion part is used to interpret the results from the statistical test.

4.1 Response Rate

The current study aims to have a minimum sample size of 384 respondents in WPKL. There are 400 existing copies of questionnaires distributed in the targeted area. Among 400 copies, 16 copies of filled questionnaires were removed because some respondents ignored some statements, left some questions unanswered, also gave incorrect feedback in providing their responses. These issues would lead to low response rate and bias results.

Therefore, it is very important to give a short briefing to respondents about the purpose of the study to ensure that they have understood the objective of conducting the study. As a result, this study acquires 384 fully completed questionnaires with the response rate of 96%.

4.2 Respondents' Demographic Profiles

In the survey, the demographic profile for respondents is based on age, education level, gender, monthly income, marital status, race, monthly expenses, and monthly saving. As shown in [Table 4.1](#), a total of 230 (59.89%) female and 154 (40.11%) male working adults had participated in the survey. By looking into their age groups, 42.45% and 28.91% of working adults aged 20 to 24 and 25 to 29 years old are most involved in this survey as the age groups tend to have the highest depression rate at 3.1% and 3.9% ([National Health and morbidity survey, 2019](#)).

It is well established that most Chinese and Malays reside in the WPKL instead of Indian and other races. In order to represent the population, the survey involves 46.09% of Chinese working adults and 34.90% of Malay working adults as compared to Indian and other races. Fresh graduates' starting salary is ranged between RM2,399 and RM3,199 ([Malaysian Employers Federation,](#)

2019). In the survey, 58.07% of respondents are found to hold bachelor degree with their monthly income between RM2,001 and RM4,000.

Since WPKL is known for its high costs of living, 47.92% of respondents are able to have their monthly savings below RM500. As shown in Table 4.1, the high costs of living could also affect 33.85% of those respondents who have income between RM2,000 and RM4,000 to cover their high monthly expenses between RM1,201 and RM1,800.

Table 4.1: Respondents' demographic characteristics

		Number	Percentage (%)
Gender	Male	154	40.11
	Female	230	59.89
Marital Status	Single	302	78.65
	Married	78	20.31
	Divorced	4	1.04
Age Group	20-24 years old	163	42.45
	25-29 years old	111	28.91
	30-34 years old	67	17.45
	35-39 years old	43	11.19
Race	Malay	134	34.90
	Chinese	177	46.09
	Indian	73	19.01
	Others	0	0
Level of Education	Primary	1	0.26
	Secondary school	30	7.81
	Certificate/diploma	48	12.5
	Bachelor of degree	223	58.07
	Master degree	67	17.45
	Doctorate degree or other qualifications	15	3.91
Monthly Income	Less than RM2,000	112	29.17
	RM2,001-RM4,000	151	39.32
	RM4,001-RM6,000	64	16.67
	RM6,001-RM8,000	34	8.85
	More than RM8,001	23	5.99
Monthly Expenses	Less than RM600	40	10.42
	RM601-RM1,200	98	25.52
	RM1,201-RM1,800	130	33.85
	RM1,801-RM2,400	62	16.15
	RM2,401 and above	54	14.06
Monthly Saving	Less than RM500	184	47.92
	RM501-RM1,000	104	27.08
	RM1,001-RM1,500	44	11.46
	RM1,501-RM2,000	19	4.95
	RM2,001-RM2,500	18	4.69
	RM2,501 and above	15	3.90

Source: Developed for study

4.3 Scale of Measurement

Scale of measurement is a classification that indicates the nature of information within the values assigned to variables. There are four criteria needed to be carried out to evaluate the adequacy of the measurement model, namely outer loadings, construct reliability and validity, convergent validity and discriminant validity.

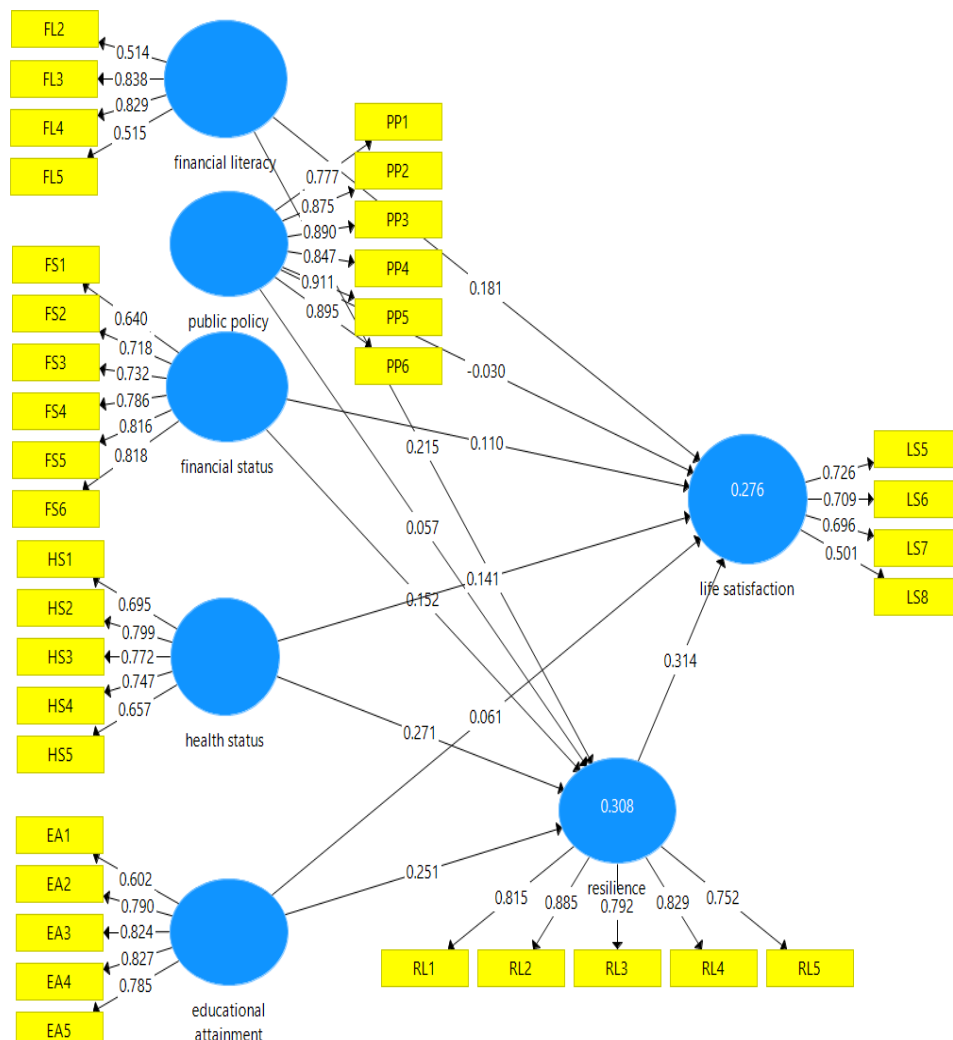


Figure 4.1: PLS-SEM measurement model with outer loadings and path coefficients

Source: Developed by PLS-SEM software

4.2.1 Outer Loading

To determine whether items are considered to be satisfactory, the minimum requirements of the factor loading values should be 0.4 (Hair, William, Barry, & Anderson, 2010), 0.7 and above (Henseler, Rongle & Sinkovics, 2009; Gotz, Lehr-Gobbers & Krafft, 2010; Olalera, 2013; Hair et al., 2014). Otherwise, the items should be removed.

As shown in Table 4.2, the outer loading value of educational attainment (EA) is above the acceptable value of 0.4. The results show that 0.602 for EA1, 0.790 for EA2, 0.824 for EA3, 0.827 for EA4 and 0.785 for EA5. Next, the results of financial literacy items of FL2, FL3, FL4, and FL5 are recorded as 0.514, 0.838, 0.829 and 0.515, respectively. Since the loading value for FL1 is found to be below than 0.4, FL1 is decided to be dropped from financial literacy.

For financial status (FS), the outer loading values for each item are found to be above 0.6. The outer loading values for FS1, FS2, FS3, FS4, FS5 and FS6 are 0.640, 0.718, 0.732, 0.786, 0.816 and 0.818, respectively. For physical health status (HS), its loading values for HS1, HS2, HS3, HS4 and HS5 are recorded to be 0.695, 0.799, 0.772, 0.747 and 0.657, respectively. The items from life satisfaction such as LS4, LS5, LS6 and LS7 are recorded to have loading values of 0.726, 0.709, 0.696 and 0.501, respectively. However, LS1 to

LS3 are not above the minimum required value of 0.4. Hence LS1 to LS3 are dropped from the list.

The outer loading for employment policy (PP) and resilience (RL) is found to be above the superior required value of 0.7. For example, the loading values for PP1, PP2, PP3, PP4, PP5 and PP6 are recorded to be 0.777, 0.875, 0.890, 0.847, 0.911 and 0.895, respectively. For resilience (RL) such as RL1, RL2, RL3, RL4 and RL5, they are found to have loading values of 0.815, 0.885, 0.792, 0.829 and 0.752, respectively.

Table 4.2: The results of outer loading

	EA	FL	FS	HS	LS	PP	RL
EA1	0.602						
EA2	0.790						
EA3	0.824						
EA4	0.827						
EA5	0.785						
FL2		0.514					
FL3		0.838					
FL4		0.829					
FL5		0.515					
FS1			0.640				
FS2			0.718				
FS3			0.732				
FS4			0.786				
FS5			0.816				
FS6			0.818				
HS1				0.695			
HS2				0.799			
HS3				0.772			
HS4				0.747			
HS5				0.657			
LS5					0.726		
LS6					0.709		
LS7					0.696		
LS8					0.501		
PP1						0.777	
PP2						0.875	
PP3						0.890	

PP4	0.847	
PP5	0.911	
PP6	0.895	
RL1		0.815
RL2		0.885
RL3		0.792
RL4		0.829
RL5		0.752

Notes: EA denotes educational attainment; FL denotes financial literacy; FS denotes financial situation; HS denotes physical health status; LS denotes life satisfaction; PP denotes employment policy; RL denotes resilience
Source: Developed by PLS-SEM software

4.2.2 Construct Reliability and Validity Test

The composite reliability is a better alternative to the Cronbach's Alpha because the scale reliability of Cronbach's Alpha may be overestimated ([Garson, 2016](#)). In order to confirm the convergent validity, each latent variable composite reliability and average variance extracted (AVE) are evaluated. The minimum values of the composite reliability and AVE are 0.7 ([Henseler et al., 2012](#)) and 0.4 ([Fornell & Larcker, 1981](#); [Lam, 2012](#); [Huang, Wang, Wu, & Wang, 2013](#); [Muhamad & Nor-Azreen, 2016](#)). Otherwise, the items should be removed.

As shown in [Table 4.4](#), values of composite reliability for educational attainment, financial literacy, financial situation, physical health status, employment policy, life satisfaction, and resilience are 0.878, 0.778, 0.887,

0.855, 0.948, 0.756 and 0.908, respectively. These values are scored 0.7 and above implying the strong composite reliability among constructs.

As shown in [Table 4.3](#), the values of AVE for education attainment, financial situation, physical health status, employment policy and resilience are 0.593, 0.569, 0.541, 0.752, and 0.665, respectively, except for financial literacy and life satisfaction which have the values lower than 0.5. However, the value of composite reliability for financial literacy and life satisfaction is higher than 0.6. Therefore, the convergent validity of financial literacy and life satisfaction is considered to be adequate.

Table 4.3: The results of convergent validity test

	Composite reliability	Average variance extracted
Educational attainment	0.878	0.593
Financial literacy	0.778	0.480
Financial situation	0.887	0.569
Physical health status	0.855	0.541
Life satisfaction	0.756	0.441
employment policy	0.948	0.752
Resilience	0.908	0.665

Source: Developed by PLS-SEM software

4.2.3 Discriminant Validity Test

Discriminant validity is used to measure the relationship between the constructs ([Henseler et al., 2014](#)). The discriminant validity evaluates by using cross-

loading of indicators, Fornell and Larcker criterion, and Heterotrait-monotrait (HTMT) ratio. For the requirements of Fornell-Larcker text, the constructs square root AVE must be greater than the correlations value between constructs and the score less than 0.9. Otherwise, when the score is more than 0.9, it shows that there are overlapping constructs.

As shown in Table 4.4, the Fornell-Larcker values for educational attainment, financial literacy, financial situation, physical health status, employment policy, life satisfaction and resilience are recorded to be 0.770, 0.693, 0.754, 0.736, 0.867, 0.664, and 0.816, respectively. Given that the score is less than 0.9, the Fornell-Larcker's key requirement (square root of AVE is greater than constructs' correlations) could be met, indicating that there is discriminant validity among all constructs.

Table 4.4: The results of Fornell-Larcker

	EA	FL	FS	HS	LS	PP	RL
EA	0.770						
FL	-0.012	0.693					
FS	0.310	0.085	0.754				
HS	0.238	0.009	0.248	0.736			
LS	0.236	0.262	0.274	0.299	0.664		
PP	0.259	-0.001	0.329	0.161	0.112	0.867	
RL	0.375	0.227	0.334	0.379	0.462	0.215	0.816

Notes: EA denotes educational attainment; FL denotes financial literacy; FS denotes financial situation; HS denotes physical health status; LS denotes life satisfaction; PP denotes employment policy; RL denotes resilience

Source: Developed by PLS-SEM software

4.2.4 Cross Loading

The requirement of the cross loading value is that the items' loading must be more than the loading value with other constructs (Hair et al., 2011). Based on Table 4.5, the highest value of cross loading under educational attainment is recorded to be 0.827 for EA4. Then, it is followed by the values of cross loading for EA1, EA2, EA3 and EA5 which are recorded to be 0.602, 0.790, 0.824 and 0.785, respectively. By looking at the constructs of financial literacy, the highest value of cross loading is recorded to be 0.838 for FL3. Then, it is followed by values of cross loading for FL2, FL4 and FL5 which are recorded to be 0.514, 0.829, and 0.515, respectively.

Next, the highest value of cross loading under financial status is recorded to be 0.818 for FS6, followed by values of cross loading for FS1 of 0.640, FS2 of 0.718, FS3 of 0.732, FS4 of 0.786, and FS5 of 0.816. Furthermore, the highest value of cross loading under health status is recorded to be 0.799 for HS2. The other values of cross loading for HS1, HS3, HS4 and HS5 are recorded as 0.695, 0.772, 0.747 and 0.657, respectively. For life satisfaction, the highest value of cross loading is recorded to be 0.726 for LS5. Then, it is followed by the values of cross loading for LS6, LS7 and LS8 which are recorded to be 0.709, 0.696, and 0.501, respectively.

Under the construct of employment policy, the highest value of cross loading is recorded to be 0.911 for PP5. Then, it is followed by the values of cross loading of 0.777 for PP1, 0.875 for PP2, 0.890 for PP3, 0.847 for PP4 and 0.895 for PP6. Among the values of cross loading for resilience, RL2 has the highest value of cross loading of 0.885. Then, it is followed by the values of cross loading for RL1, RL3, RL4, and RL5 which are recorded as 0.815, 0.792, 0.829, and 0.752, respectively. Overall, values of cross loading for all items under constructs are greater than the cross loading in other constructs (Hair et al., 2011). As a result, the discriminant validity is confirmed.

Table 4.5: The results of cross loading

	EA	FL	FS	HS	LS	PP	RL
EA1	0.602	-0.146	0.240	0.196	0.169	0.202	0.243
EA2	0.790	-0.034	0.269	0.242	0.194	0.224	0.281
EA3	0.824	-0.072	0.277	0.148	0.149	0.247	0.289
EA4	0.827	0.062	0.238	0.162	0.194	0.181	0.322
EA5	0.785	0.109	0.178	0.174	0.200	0.154	0.299
FL2	-0.076	0.514	0.004	-0.007	0.108	-0.091	0.027
FL3	-0.032	0.838	-0.070	-0.056	0.200	-0.137	0.109
FL4	-0.025	0.829	-0.049	-0.040	0.207	-0.133	0.147
FL5	0.048	0.515	0.271	0.098	0.169	0.251	0.246
FS1	0.247	-0.098	0.640	0.123	0.160	0.218	0.179
FS2	0.209	0.088	0.718	0.278	0.190	0.150	0.312
FS3	0.193	0.073	0.732	0.140	0.151	0.318	0.252
FS4	0.222	0.116	0.786	0.182	0.259	0.235	0.228
FS5	0.255	0.111	0.816	0.134	0.247	0.293	0.286
FS6	0.285	0.042	0.818	0.249	0.213	0.287	0.230
HS1	0.215	0.005	0.171	0.695	0.151	0.058	0.232
HS2	0.167	0.126	0.172	0.799	0.252	0.135	0.339
HS3	0.164	0.099	0.155	0.772	0.230	0.137	0.266
HS4	0.177	-0.117	0.203	0.747	0.235	0.113	0.288
HS5	0.167	-0.105	0.215	0.657	0.213	0.136	0.254
LS5	0.328	0.212	0.282	0.274	0.726	0.120	0.465
LS6	0.081	0.155	0.139	0.222	0.709	0.094	0.223
LS7	0.029	0.174	0.108	0.121	0.696	0.066	0.243
LS8	-0.005	0.129	0.104	0.094	0.501	-0.067	0.130
PP1	0.150	0.023	0.307	0.156	0.038	0.777	0.105
PP2	0.237	0.083	0.324	0.149	0.113	0.875	0.237
PP3	0.144	0.099	0.249	0.127	0.107	0.890	0.172
PP4	0.270	-0.078	0.251	0.151	0.089	0.847	0.173
PP5	0.253	-0.066	0.302	0.101	0.104	0.911	0.195
PP6	0.264	-0.074	0.286	0.165	0.102	0.895	0.192
RL1	0.277	0.209	0.277	0.307	0.344	0.096	0.815
RL2	0.359	0.168	0.320	0.340	0.357	0.185	0.885
RL3	0.356	0.148	0.267	0.305	0.421	0.250	0.792
RL4	0.285	0.253	0.262	0.292	0.388	0.189	0.829
RL5	0.238	0.149	0.231	0.302	0.370	0.145	0.752

Notes: EA denotes educational attainment; FL denotes financial literacy; FS denotes financial situation; HS denotes physical health status; LS denotes life satisfaction; PP denotes employment policy; RL denotes resilience
 Source: Developed by PLS-SEM software

4.2.5 Heterotrait-Monotrait (HTMT) Ratio

Lastly, the HTMT ratio is used to further assess the discriminant validity. The requirements of HTMT ratio should be below 0.85 (Kline, 2011). The score exceeds 0.7, indicating that there is a discriminant validity problem in the research framework. (Henseler et al., 2017). Based on Table 4.6, the values of HTMT ratio for educational attainment, financial literacy, financial situation, physical health status, life satisfaction, employment policy, and resilience are lower than 0.7 and 0.85. This confirms the discriminant validity for all constructs.

Table 4.6: The results of HTMT ratio

	EA	FL	FS	HS	LS	PP
EA						
FL	0.163					
FS	0.378	0.239				
HS	0.303	0.181	0.302			
LS	0.241	0.388	0.311	0.358		
PP	0.293	0.294	0.375	0.187	0.163	
RL	0.438	0.261	0.381	0.453	0.516	0.225

Notes: EA denotes educational attainment; FL denotes financial literacy; FS denotes financial situation; HS denotes physical health status; LS denotes life satisfaction; PP denotes employment policy; RL denotes resilience
 Source: Developed by PLS-SEM software

4.3 Multicollinearity

The variance inflation factor (VIF) is used to detect multicollinearity problem in the regression analysis. Multicollinearity is the linear relationship that exists between independent variables in the same regression model. For a rule of thumb for defining the VIF, the VIF value of 1 means that all independent variables are not correlated with each other (Hair et al., 2010).

If the VIF value falls between 1 and 5, the variables are moderately correlated and acceptable. However, there is a high correlation when the VIF value is from 5 and above, and this is a cause for concern. Some papers argue that a limit value of VIF is less than 5, implying that it is acceptable and appropriate (Ringle, Wende, & Becker, 2015). In Table 4.7, the values of VIF for all constructs are recorded to be less than 5. This demonstrates that there exists less multicollinearity among all constructs.

Table 4.7: The results of variance inflation factor (VIF)

	LS	RL
EA	1.265	1.174
FL	1.076	1.010
FS	1.272	1.239
HS	1.209	1.103
PP	1.166	1.161
RL	1.446	

Notes: EA denotes educational attainment; FL denotes financial literacy; FS denotes financial situation; HS denotes physical health status; PP denotes employment policy; RL denotes resilience.

4.4 R-Squared

R-squared is used to indicate how well the data can fit the regression model (CFI Education, 2015). Normally, a high R-squared indicates a better fit for the regression model. In terms of human behaviour-psychology, arts, humanities and social sciences, the R-squared would be low because human behaviour cannot be accurately predicted. (Cohen, 1988; Falk & Miller, 1992; Cohen, Cohen, West, & Aiken, 2003; Minitab, 2013). In the cross-sectional modelling based on survey data, the value of R-squared normally falls around 10%-20%. Hence, the substantial value of R-squared in the context that involves the field of social sciences values should be greater than 0.10 and more than 0.26 (Cohen, 1988; Falk & Miller, 1992; Cohen et al., 2003).

As shown in Table 4.8, R-squared of 0.276, indicates that 27.6% of the variation in life satisfaction can be explained by a variation in educational attainment, financial literacy, employment policy, financial situation, and physical health status. Next, R-squared of 0.308 indicates that 30.8% of the variation in resilience can be explained by the variation in financial literacy, employment policy, financial situation, educational attainment, and physical health status. Both values of R-squared are greater than 0.26, implying on the substantial variations in explaining human behaviour.

Table 4.8: The results of R-squared

	R-squared
Life Satisfaction	0.276
Resilience	0.308

4.5 Inferential Analysis

In this study, inferential analysis is performed to detect direct and mediation effects. In line with this, the testing would be conducted on [H₁](#), [H₃](#), [H₅](#), [H₇](#) and [H₉](#) for direct effects, while [H₂](#), [H₄](#), [H₆](#), [H₈](#) and [H₁₀](#) are for the indirect effects.

4.5.1 Testing on the Determinants of Life Satisfaction

The path coefficient analysis is used to identify the direct relationship between the dependent variable and independent variables. All hypotheses are tested at the 5% level. The results of the hypothesis testing for the direct effects of the determinants toward the life satisfaction are summarized in [Table 4.9](#). The results indicate that respondents' financial literacy significantly influence their life satisfaction at 1% level, while their financial situation and physical health status are found to significantly influence their life satisfaction at 5% level. This finding suggests that working adults' financial literacy, financial situation and physical health status influence their life satisfaction. As shown in the results, both [H₇](#) and [H₉](#) cannot be supported even at 10% level. This finding indicates

that respondents' educational attainment and employment policy do not significantly influence their life satisfaction.

Table 4.9: The results of hypothesis testing for direct effect

Hypothesis	Path Coefficients	P-values	Decision
H ₁ : Financial literacy is significantly related to life satisfaction.	0.181	0.001	Supported
H ₃ : Financial situation is significantly related to life satisfaction.	0.110	0.047	Supported
H ₅ : Physical health status is significantly related to life satisfaction.	0.141	0.018	Supported
H ₇ : Educational attainment is significantly related to life satisfaction.	0.061	0.418	Not supported
H ₉ : Employment policy is significantly related to life satisfaction.	-0.030	0.586	Not supported

4.5.2 Testing on the Mediation Effect of Resilience on the Determinants Toward Life Satisfaction

Mediator explains the causal path between the independent and dependent variables. In the study, the analysis of indirect effect and VAF is performed to examine whether or not the resilience can mediate the relationship between the determinants toward life satisfaction. All the hypotheses are tested at the 5% of significance level.

Based on [Table 4.10](#), the results of the mediation analysis show that resilience significantly mediates the relationship between financial literacy, financial situation, and physical health status toward life satisfaction at 1%

significance level, while resilience significantly mediates the relationship between educational attainments towards life satisfaction at 5% significance level. As a result, **H₂**, **H₄**, **H₆** and **H₈** are supported. However, resilience does not mediate the relationship of employment policy towards life satisfaction. Thus, **H₁₀** fails to be supported.

Table 4.10: The results of hypothesis testing for mediation effect

	Indirect effect		VAF analysis	Significant/not significant
	Coefficient	P-values		
H ₂ : Financial literacy is mediated by resilience towards life satisfaction	0.068	0.001	27% (partial mediation)	Significant
H ₄ : Financial situation is mediated by resilience towards life satisfaction.	0.048	0.026	30% (partial mediation)	Significant
H₆: Physical health status is mediated by resilience towards life satisfaction.	0.085	0.000	38% (partial mediation)	Significant
H ₈ : Educational attainment is mediated by resilience towards life satisfaction.	0.079	0.010	56% (partial mediation)	Significant
H ₁₀ : Employment is mediated by resilience towards life satisfaction.	0.018	0.263	Suppressor effect (less than 20%)	Not Significant

Source: Developed for study

Furthermore, the VAF analysis is conducted to measure the level of mediation (Andrei, Gazzola, Zbucnea, & Alexandru, 2017). The analysis classifies that when the VAF value is lesser than 20%, the construct does not mediate the relationship between the dependent and independent variables (no mediation), while the VAF value falls between 20% and 80%, implying that the construct partially mediates the relationship between dependent and independent variables (partial mediation). When the VAF value is more than

80%, it shows that the construct fully mediates the relationship between dependent and independent variables (full mediation). In one case, the value of VAF can be greater than one when the total effect is smaller than the indirect effect (Shrout & Bolger, 2002). If the case provides the negative or infinity value of VAF, this case is called inconsistent mediation or suppressor effect (Hayes, 2009; MacKinnon, Krull, & Lockwood, 2010).

As shown in Table 4.11, the VAF value of 0.27 for H₂ indicates that resilience could explain 27% of financial literacy impact on working adults' life satisfaction. H₄ suggests that resilience has 30% effect to mediate the relationship of financial situation influence and working adults' life satisfaction. Furthermore, the VAF value of 0.38 for H₆ indicates that resilience has 38% of mediation effect on physical health status towards life satisfaction. For H₈, its value of 0.56 indicates that resilience has 56% mediation effect on the relationship of educational attainment towards life satisfaction. For H₁₀, its VAF is found to yield a negative value, indicating smaller total effect than indirect effect. This finding suggests that resilience does not play the role in mediating the relationship between employment policy and life satisfaction.

Table 4.11: The results of variance accounted for

Variables	$VAF = \frac{\text{indirect effect}}{\text{total effect}}$	Strength of mediation
Financial literacy	$\frac{0.068}{0.248} = 0.27$ (27%)	Partial relationship effect on the relationship between variables. (0.2-0.8)
Employment policy	$\frac{0.018}{-0.012} = -1.5$	Suppressor effect on the relationship between variables.
Financial situation	$\frac{0.048}{0.158} = 0.3$ (30%)	Partial relationship effect on the relationship between variables. (0.2-0.8)
Health status	$\frac{0.085}{0.226} = 0.38$ (38%)	Partial relationship effect on the relationship between variables. (0.2-0.8)

Educational attainment	$\frac{0.079}{0.140} = 0.56$ (56%)	Partial relationship effect on the relationship between variables. (0.2-0.8)
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Note: VAF denotes variance accounted for

Source: Developed for study

4.6 Result Discussion

Based on the results, the decisions for H_1 - H_{10} are stated in Table 4.12.

Table 4.12: Summary of the results of hypothesis testing

Hypothesis	Supported	Not supported
H_1 : Financial literacy is positively associated with life satisfaction.	√	
H_2 : Financial literacy is positively mediated by resilience towards life satisfaction.	√	
H_3 : Financial situation is positively associated with life satisfaction.	√	
H_4 : Financial situation is positively mediated by resilience on life satisfaction.	√	
H_5 : Physical health status is positively associated with life satisfaction.	√	
H_6 : Physical health status is positively mediated by resilience towards life satisfaction.	√	
H_7 : Educational attainment is positively associated with life satisfaction.		√
H_8 : Educational attainment is positively mediated by resilience on life satisfaction.	√	
H_9 : Employment policy is positively associated with life satisfaction.		√
H_{10} : Employment policy is positively mediated by resilience towards life satisfaction.		√

Source: Developed for study

4.6.1 The influence of Financial Literacy on Life Satisfaction

The results in [Table 4.12](#) show that financial literacy significantly affects the level of life satisfaction. This finding is consistent with those findings of [Barand and Imanian \(2017\)](#), [Hassibuan and Lubis \(2017\)](#) and [Ilies et al. \(2019\)](#). Working adults who possess a higher level of financial literacy (financial knowledge) of managing their money allocations would have a higher level of life satisfaction. In addition, resilience is found to mediate the relationship between financial literacy and life satisfaction. This finding is supported by the studies of [Maison \(2019\)](#) and [Jayasinghe et al. \(2020\)](#). Those working adults who have resilience could improve their financial literacy by reaching their financial goals, thereby improving their life satisfaction. For example, individuals can better allocate their lifetime resources (saving and income for spending, lending, borrowing and investing) and persist with the daunting process of financial management in a world of uncertainty.

For those with financial knowledge, they could make wiser financial decisions by preparing a proper planning of financial matters to maintain a low debt ratio and proper money allocation. It also beneficial for any helplessness in the event of emergencies. As a result, their money management ability would uplift their life satisfaction. The results demonstrate that resilience can develop good individual financial behaviour to promote their financial literacy and improve their financial decision-making skills. In turn, those with higher financial capability tend to have better life satisfaction in general. Resilient

people are more satisfied with their life because they feel better when they would use their ability to develop financial resources for living well.

4.6.2 The Influence of Financial Situation on Life Satisfaction

As shown in [Table 4.12](#), the results support Hypothesis 3 (H_3). This finding is consistent with the study of [Ngamaba \(2016\)](#) and [Jovanovic and Joshanloo \(2019\)](#), indicating that there is a significant relationship between financial situation and life satisfaction. People with a better financial situation will have a high level of life satisfaction. Furthermore, Hypothesis 4 (H_4) is found to be supported in this study, demonstrating that resilience mediates the relationship between financial situation and life satisfaction. This finding demonstrates that those resilient people tend to use their strength to increase their financial situation and thus enhance their life satisfaction level. This is consistent with those findings of [Ngamaba \(2016\)](#) and [Lee and Lee \(2019\)](#).

Those individuals who have better financial situation may result in the enhancement of their living conditions such as nutrient enhancement, quality of food, good health status and higher education opportunities. When people are suffering from financial concern, they are likely to live life frugally. As a consequence, their life satisfaction would be negatively affected. The sufficient

high level of incomes could make individuals no longer need to worry about their financial situation, resulting in their life satisfaction. Furthermore, those resilient people undoubtedly experience financial stress as well, but fortunately they manage to apply supportive measures (e.g., good career, investment) and use their strengths, skills and resources in addressing their financial issues to achieve financial stability. As a result, they can pay off and stay out of debt and prepare for the future (savings). With such advantages in life, they can achieve better life satisfaction.

4.6.3 The Influence of Physical Health Status on Life Satisfaction

The results support Hypothesis 5 (H_5), stating that physical health status significantly affects the life satisfaction level among working adults. This finding is consistent with those findings of [Goel, Rossella, and Fu \(2018\)](#), [Pan, Chan, Xu, and Yeung \(2019\)](#) and [Jovanovic and Joshanloo \(2019\)](#). This finding implies that people who possess good physical health status could have a higher life satisfaction level. Moreover, resilience is found to mediate the impact of physical health status towards life satisfaction ([Guo, 2017](#); [Yang, Xia, Han, & Liang, 2018](#); [Yildirim, 2019](#)). As stated by Hypothesis 6 (H_6), those workers with a resilient mindset tend to develop good health behaviours to maintain good physical health status, which enhances their life satisfaction level due to a lower tendency of getting stressed or depressed and falling ill.

The finding demonstrates that positive health status acts as a state of well-being. Good health status can positively influence the abilities and work productivity of an individual, enabling individuals to contribute to the community. This subsequently gives a sense of accomplishment. In turn, they could improve the life satisfaction level. On the contrary, people with health problems will indicate low level of life satisfaction.

Furthermore, resilience can improve the level of life satisfaction when people use their resilience skills to develop good health behaviours in order to promote a healthy lifestyle. In general, a healthy lifestyle is found to be useful in preventing various physical and mental illnesses. Thus, they are likely to have a better life satisfaction level. For working adults, this is common for them to encounter financial and work-related stress in their daily lives. In this case, resilience skills become crucial for them to cope with stress and hardship without getting themselves into unhealthy behaviours and achieve a higher life satisfaction level. In conclusion, resilient people could improve their health status and life satisfaction.

4.6.4 The Influence of Educational Attainment on Life Satisfaction

Surprisingly, the results in [Table 4.12](#) show that educational attainment and life satisfaction have an insignificant relationship, leading to the rejection of Hypothesis 7 ([H₇](#)). This indicates that higher educational attainment would lower the life satisfaction level. However, the finding contradicts those findings of [Clins et al. \(2009\)](#), [Zanjani et al. \(2017\)](#) and [Hoensey et al. \(2018\)](#). In contrast, resilience is found to mediate the relationship between educational attainment and life satisfaction, supporting Hypothesis 8 ([H₈](#)). This supports the fact that those resilient people who attained higher education could enhance their life satisfaction level. Similar findings are reported in the works of [Ainize, Estibaliz and Oihane \(2018\)](#) and [Kilinc, Yildiz and Kavak \(2019\)](#).

Those people with varying educational backgrounds regardless of the level of education) tend to have high expectations for their career, promotion and income level. When their high expectations are not achieved, their psychological well-being would be offset. This statement is further supported by [Graham, Zhou and Zhang \(2017\)](#) who state that people with higher education level might experience dissatisfaction with their life due to the failure in meeting their high expectations on their living standards. On the other hand, people with a lower level of education might easily be satisfied with their current simple living conditions. Therefore, it is important to develop resilience skills to cope

with the possible disappointments in life. Besides, resilient people tend to have better behaviours towards education, attitudes, social and emotions that improve their academic performance and educational attainment in getting better job opportunity and promotion, thereby, increasing their overall satisfaction in life.

4.6.5 The Influence of Employment Policy on Life Satisfaction

The results reject Hypothesis 9 ([H₉](#)), indicating an insignificant relationship between employment policy and life satisfaction. This finding is consistent with those findings of [Lee and Lee \(2019\)](#) and [Ngoo et al. \(2020\)](#). The implementation of policies does not relate with the life satisfaction of working adults.

Furthermore, the results also show the rejection of Hypothesis 10 ([H₁₀](#)) to indicate that resilience does not mediate the impact of employment policy on the life satisfaction of working adults. Similar findings are found in the study of [Capano and Woo \(2017\)](#), where their finding indicates that resilience has little to no effect on the mindset regarding the implementation of employment policy, causing the employment policy to not leave any impact to the improvement of the life satisfaction level. The rejection of both hypotheses indicates that individuals who have resilience or not would not concern too much on how the proposed and implemented employment policy could influence their standard

of living. The reason to support this finding is that they are more concerned on how to increase their productivity to get job promotion in the most competitive workplaces or metropolitan area. Consequently, the daily lifestyle of working adults still remains the same regardless of uncertainties in policy changes.

4.7 Conclusion

In summary, the results confirm that all of the constructs such as financial literacy, financial situation, educational attainment, physical health status, and employment policy are reliable and valid before the hypotheses testing. After that, the direct and mediation effect (indirect) would be tested. The results of the direct effect show that hypotheses of H_1 , H_3 and H_5 are supported, while H_7 and H_9 are rejected. Followed by the mediation effect, the hypotheses (H_2 , H_4 , H_6 and H_8) are also supported except H_{10} .

CHAPTER 5: CONCLUSION

5.0 Overview

This chapter starts with the main findings derived from the analysis. Next, it is followed by some suggested theoretical and practical implications according to the main findings. Lastly, the limitations of this study and recommendations for future studies are highlighted.

5.1 Main Findings

This study aims to investigate the determinants and mediation effects of resilience towards the life satisfaction among working adults in WPKL. A total of five hypotheses, namely H_1 , H_3 , H_5 , H_7 and H_9 are developed to achieve the first objective. The results show that there exist significant positive relationships between financial literacy, financial situation and physical health status with the working adults' life satisfaction. However, an insignificant relationship between educational attainment and employment policy with the life satisfaction of

working adults is found. These findings demonstrate that employment policy and educational attainment are not the main determinants of the working adults' life satisfaction since their daily lifestyle still remains the same regardless of policy changes and uncertainties. On the other hand, those individuals who are highly educated tend to have high expectations for their job promotion and income level. When their expectations could not be met, they are prone to feel dissatisfied with their lives.

The first main finding from the result is that financial literacy has a stronger direct impact on life satisfaction as compared to financial situation and physical health status. The reason behind it is that WPKL is a metropolitan area with high cost of living, high non-performing loan and an increasing number of bankruptcy cases. The main problem associated with low level of financial literacy is that those individuals who suffer from credit issues may be prone to experience bankruptcy. Also, individuals may not fully utilise their "idle" money in profitable investment opportunities. As the world progresses, individuals may need more money and more needs, and thus, financial products have become more complex. Therefore, financial literacy refers to the ability to understand the ways in which different financial skills can be applied effectively from their financial knowledge, so that financial stability can be accomplished.

Furthermore, financial literacy is about measuring how well an individual can use and understand personal finance-related information. When individuals have the right financial-related information, they can analyse the

information before making any financial matter decisions. For example, when managing personal financial-related information, they can decide to pay larger periodical instalment but smaller total loan repayment and vice versa. When individuals grow older, their expenses expand as they need to put aside their savings for retirement. At the same time they need to cater for or fulfil other financial needs such as investment activities, paying off loans and funding their children's education.

Those individuals with a lack of financial literacy tend to make welfare-reduction decisions such as maintaining large amount of outstanding on credit cards, loans, and high expenses. In short, low level of financial literacy would negatively affect their satisfaction of life. For those with financial literacy, they could make rational financial decisions by preparing a proper planning of financial matters thereby ensuring their sustainability of financial status. When individuals enjoy their financial stability, they have access to better nutrition and quality of food, better healthcare, higher education opportunities and better shelter. As a result, their money management ability would contribute to increased life satisfaction.

The second objective of this study is to examine the mediating effect of resilience on financial literacy, financial situation, physical health status, educational attainment and employment policy toward life satisfaction. A total of five hypotheses was developed to test the mediating effects. The results demonstrate that resilience could mediate the relationship between financial

literacy, financial situation, physical health status and educational attainment with life satisfaction. However, resilience is found to not mediate the relationship between employment policy and life satisfaction. The reason is that political uncertainties may influence their decisions in allocating their incomes for consumption and saving. Political uncertainties may cause those adults to be more cautious in spending their money. They are likely to choose saving over spending to handle the uncertainties. As a result, they tend to consume less in daily life, hence, lowering their living conditions. Under such condition, their life satisfaction is eventually low.

Resilience is found to have a stronger mediating effect on physical health status towards the life satisfaction, as compared to financial literacy, financial situation, and educational attainment. This finding suggests that the WPKL is a high economic demand for treatment and habitation in the capital city of the country, causing individuals aged 20-39 years old to experience profound changes to their lifestyle. These individuals need to face rapid personal development to experience major transitions of life, such as leaving the parental home, education, starting employment, confronting economic challenges and a dealing with a prolonged transition to middle-late adults. These transitions may influence their physical health behaviour due to the rapid environment change and the stressful competitive workplace. As a result, risky health behaviour causes poor physical health status and negatively affects their life satisfaction.

Coping with the physical health problems in a positive way is known as resilience. In order to survive, individuals need to cultivate their resilience skills to develop good health behaviour. Resilience is one of the factors of enhancing individuals' health awareness that causes their quick response to change their health behaviour to cope with the stress in having a good healthy life. Additionally, those individuals with better health behaviours can avoid developing risky behaviours, such as smoking, excessive alcohol consumption and drug abuse. Therefore, those m with good health status could have a relatively low depression rate and greater satisfaction with life. Due to the high cost of medical expenses that leads to financial instability, those individuals who are not resilient may not be able to handle their problems well in difficult situations, which would harm their physical health status and negatively affect their satisfaction of life. Our findings are compared with the existing findings.

5.2 Policy Implications

The findings of the study are expected to provide some insights for working adults in improving their life satisfaction. Based on the findings, theoretical and practical implications are suggested as follows.

5.2.1 Theoretical Implication

The higher level of life satisfaction would benefit individuals in various aspects, such as job, physical health, mental health and others. The finding indicates that poor health status is strongly related to life dissatisfaction because poor health would influence the work productivity of individuals, and thus, negatively affect their daily lives. Meanwhile, WPKL is listed as the fourth most overworked cities in the world. This means that individuals who are overworking may tend to put stress on their mental health. Consequently, they would engage in risky activities such as smoking, excessive alcohol consumption and drug abuse. Therefore, individuals are suggested to equip with resilience skills in order to overcome and avoid any health problems.

Based on the existing literature, [Mcknight, Huebner and Suldo \(2002\)](#) find that life satisfaction can function as an intrapersonal strength when individuals possess the psychological resilience to cope with their adversities, difficulties and tense situations. Typically, those individuals who have the resilience skills would think positively and rationally and seek effective ways to solve the adversities and difficulties in their life rather than being overwhelmed by panic and negative emotions. Also, [Zeti \(2018\)](#) and [Ting and Foo \(2018\)](#) claim that all Malaysians should develop psychological resilience to handle any adversity, work-related stress and difficult experiences in their working life with an open mind. On top of that, Malaysians could be flexible

and adaptable although they face many psychological challenges, thereby solving the adversity effectively.

From the existing studies, this study integrates the bottom-up theory that considers various aspects of personal-related matters in influencing working adults' life satisfaction. To further improve the bottom-up theory in explaining life satisfaction, this study incorporates psychological resilience that acts as a mediator.

5.2.2 Practical Implications

Based on the findings, this study suggests a few practical implications for policymakers. Firstly, the key finding of the direct effect study shows that financial literacy is one of the determinants with a strong significant relationship with life satisfaction among working adults. Secondly, the indirect effect study shows that resilience has a strong mediating effect on the relationship between physical health status and life satisfaction. Hence, efforts must be made in order to improve individuals' life satisfaction, especially those residing in the metropolitan area. To increase the life satisfaction of working adults, policymakers may focus on the financial literacy and physical health status of the workers.

This study suggests that the Malaysian Financial Planning Council (MFPC) focuses on financial literacy programmes. For example, the MFPC could improve courses to enhance the financial knowledge and financial attitudes of working adults, as well as to train them to practise good financial management behaviours. Next, the government is recommended to encourage saving habits and improve financial literacy among school students. For example, implementing financial education in the form of “children’s banks” which are formally offered in Japan and some saving-related promotions in primary and secondary schools. It allows students to experience interest calculations and understand the value of money. This may improve their saving habits, financial knowledge and financial management behaviour. To ensure a sustainable lifestyle among workers, the companies can also organise a series of training with the Credit Counselling and Debt Management Agency (AKPK) to improve their employees in terms of financial literacy and raise their employees’ awareness on financial scams.

Next, the government could organize various campaigns and programmes to encourage physical activities among working adults for example, the provision of physical activity assessment and advice as a part of the general healthcare services, working alongside communities in the provision of local physical activity programmes and promoting “sport for all”. The government could also invest in effective psychological interventions in the workplace that would reduce mental health problems significantly. For instance, the government could promote primary care prevention of physical ill-health

among working adults with mental disorders and focus on improving the integration of mental and physical health care.

To raise health awareness, the government can also revise organizational practices and engage Employee Assistance Program services for employees such as independent and professional counsellors. This mental health support could help to manage stress, health issues, family, or personal problems. A healthy workplace is where employees enjoy working and look forward to contributing their services daily, demonstrating good morale. Eventually, the boost in the work productivity can improve their living conditions that would, to a greater extent, contribute to their satisfaction in life.

5.3 Limitations of the Study

There are two limitations in the study. First of all, this study explores workplaces with the highest cost of living and stress level. Therefore, the sample size is only concentrated on working adults who are staying in the WPKL. As a result, it may lead to a lack of comprehensive analysis to represent life satisfaction in the whole country since the analyses on other states in Malaysia have not been carried out.

Secondly, this study focuses on working adults who are in the age range of 20 to 39 years old. Those adults from such a group would tend to encounter high depression and bankruptcy rate. Therefore, the results only represent the early and middle age groups (aged 20-39), while excluding the late middle and late adulthood age groups (aged 40 and above). Hence, the variety of profiles of the study population fully represents the whole working group.

5.4 Recommendations for Future Research

To provide a comprehensive understanding of the life satisfaction of the citizens in Malaysia, future researchers are recommended to focus on all capital cities in each state in Malaysia. For example, Georgetown, Ipoh, Kuantan, Kuala Terengganu, Alor Setar, Kangsar, Kota Bharu, Seremban, Malacca City, Shah Alam, Putrajaya and Johor Bahru in West Malaysia, also Kuching, Kota Kinabalu and Labuan in East Malaysia. A comparative analysis is recommended among major cities in order to reflect the actual scenario in examining life satisfaction among Malaysians.

Lastly, this study excludes the elderly population who are still engaged in jobs. The life satisfaction of this particular population can be studied in future. Future studies can also be performed through a comparative analysis between the early and middle age groups and the middle and late adulthood age groups.

It is expected to provide more insights into life satisfaction across different age groups in the country. On top of that, future researchers can explore the social, emotional and psychological aspects of life satisfaction. In order to obtain a more comprehensive findings, the researchers can use qualitative research to further focus on those aspects that influence Malaysians' life satisfaction.

5.4 Summary of the study

To conclude, this study seeks to investigate the direct and indirect relationships between independent and dependent variables among 20-39-year-old working adults in a metropolitan area, WPKL. The main findings demonstrate that those individuals who have financial literacy tend to have better satisfaction in their life. In addition, resilience plays a role as the mediator in influencing individuals' physical health status and life satisfaction. Lastly, several recommendations are suggested for future research to explore further into the research area that relates to the topic.

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Appendix



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Universiti Tunku Abdul Rahman

Survey Questionnaire

Dear Respondent,

Warmest greeting from Universiti Tunku Abdul Rahman (UTAR)

I'm the candidate of Master of Philosophy. The purpose of this survey is to conduct a research to investigate the determinants on the life satisfaction in Wilayah Persekutuan Kuala Lumpur among young working adult. Please answer all questions to the best of your knowledge. All responses are collected will be kept strictly confidentially.

Name: Bee Kai Ying
Student ID: 19ABB00562
Email: bbeekaiying@yahoo.com

Thank you for your participation.

Instructions:

- 1) There are TWO (2) sections in this questionnaire. Please answer ALL questions.
 - 2) Completion of this survey will take you less than 10 minutes.
-

Voluntary nature of the study:

Participation in this research is entirely voluntary. All information collected are treated as strictly confidential and will be used for the purpose of this study only.

Please be informed that in accordance with Personal Data Protection Act 2010 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.

Acknowledgement of notice:

- I have been notified by you and that I hereby understood, consented and agreed per UTAR notice.
- I disagree, my personal data will not be processed.

Section A: Respondent's Demographic

In this section, would like you to fill in some of your personal details. Please tick your answer and your answers will be kept strictly confidential.

1. Gender:
 Male Female
2. Marital status:
 Single Married Divorced
3. Age:
 20 - 24 years old 25 - 29 years old
 30 - 34 years old 35 - 39 years old
 Above 40 years old
4. Race:
 Malay Chinese
 Indian Others: _____
5. Level of education:
 Primary or below Secondary school
 Certificate/diploma Bachelor Degree
 Master Degree Doctorate Degree or other qualifications
6. Occupation: _____
7. Monthly income:
 Less than RM2000 RM2001 – RM4000
 RM4001 – RM6000 RM6001 – RM8000
 More than RM8001
8. Monthly expenses:
 Less than RM600 RM601 – RM1200
 RM1201 – RM1800 RM1801 – RM2400
 RM2401 and above
9. Monthly saving:
 Less than RM500 RM501- RM1000
 RM1001 – RM1500 RM1501- RM2000
 RM2001 – RM2500 RM2501 and above

Section B:

Please circle one number per line to indicate the extent to which your responses for the following statements.

Strongly disagree (SD)	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree (SA)
1	2	3	4	5	6

FINANCIAL LITERACY		SD \longrightarrow SA					
FL 1	I use credit card(s) to pay my loan(s).	1	2	3	4	5	6
FL 2	I apply the loan(s) to reduce my commitment(s).	1	2	3	4	5	6
FL 3	I allow my friend(s) to use my name to make purchase(s) of vehicle.	1	2	3	4	5	6
FL 4	I allow my friend(s) to use my name to make purchase(s) of property.	1	2	3	4	5	6
FL 5	I buy insurance to reduce my future uncertainty.	1	2	3	4	5	6

EMPLOYMENT POLICY		SD \longrightarrow SA					
PP 1	The implementation of Malaysia Employment Act would enhance my social network in career.	1	2	3	4	5	6
PP 2	The implementation of Malaysia Employment Act would enhance my welfare in working.	1	2	3	4	5	6
PP 3	The implementation of Malaysia Employment Act protects my job security.	1	2	3	4	5	6
PP 4	The implementation of Malaysia Employment Act would provide me flexible working hours.	1	2	3	4	5	6
PP 5	The implementation of Malaysia Employment Act would provide better working environment.	1	2	3	4	5	6
PP 6	The implementation of Malaysia Employment Act would enhance my productivity in career.	1	2	3	4	5	6

FINANCIAL SITUATION		SD \longrightarrow SA					
FS 1	I feel comfortable with my current salary.	1	2	3	4	5	6
FS 2	I am able to encounter my financial problem(s).	1	2	3	4	5	6
FS 3	I have my retirement plan(s).	1	2	3	4	5	6
FS 4	I have regular saving(s).	1	2	3	4	5	6
FS 5	I am able to allocate my expenditure for my family matter(s).	1	2	3	4	5	6
FS 6	I am able to allocate my expenses for emergency purpose(s).	1	2	3	4	5	6

PHYSICAL HEALTH STATUS		SD \longrightarrow SA					
HS 1	I have normal body weight.	1	2	3	4	5	6
HS 2	I have normal blood sugar level.	1	2	3	4	5	6
HS 3	I have normal blood pressure.	1	2	3	4	5	6
HS 4	I involve physical activities after working hours.	1	2	3	4	5	6

HS 5	I involve physical activities during the weekend.	1	2	3	4	5	6
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Strongly disagree (SD)	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree (SA)
1	2	3	4	5	6

EDUCATIONAL ATTAINMENT		SD \longrightarrow SA					
EA 1	The knowledge I learn from school can be apply in real life situation.	1	2	3	4	5	6
EA 2	The person who has high education level would help to increase in the social networks.	1	2	3	4	5	6
EA 3	The person who has high education level tends to meet his/her expected salary.	1	2	3	4	5	6
EA 4	The person who has high education level would have a chance in getting a job.	1	2	3	4	5	6
EA 5	The person who has high education level would have a chance in getting a job promotion.	1	2	3	4	5	6

RESILIENCE		SD \longrightarrow SA					
RL 1	I have confidence to carry out assigned task(s) by superior.	1	2	3	4	5	6
RL 2	I always ready to overcome daily challenge(s).	1	2	3	4	5	6
RL 3	I always show my optimism to others.	1	2	3	4	5	6
RL 4	I consider the challenge(s) as opportunities to improve my problem-solving skills.	1	2	3	4	5	6
RL 5	I am able to handle my stress in working.	1	2	3	4	5	6

LIFE SATISFACTION		SD \longrightarrow SA					
LS 1	I take longer time than usual to perform a task.	1	2	3	4	5	6
LS 2	I have high expectation in handling my daily task(s).	1	2	3	4	5	6
LS 3	I always have conflicts with my family member(s).	1	2	3	4	5	6
LS 4	I have a good relationship with my superior(s).	1	2	3	4	5	6
LS 5	I have a good relationship with my colleague(s).	1	2	3	4	5	6
LS 6	I feel uncomfortable when I am alone.	1	2	3	4	5	6
LS 7	I lost interest in my daily life.	1	2	3	4	5	6
LS 8	I have negative emotion in my daily life.	1	2	3	4	5	6
LS 9	I have sleepless night(s) when I encounter daily life challenge(s).	1	2	3	4	5	6

Thank you and your participation is highly appreciated.

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note.—*N* is population size. *S* is sample size.

Figure 3.2: Determining sample size for a population
Source: Krejcie & Morgan (1970)

FACULTY OF BUSINESS AND FINANCE

UNIVERSITI TUNKU ABDUL RAHMAN

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SUBMISSION OF FINAL YEAR PROJECT /DISSERTATION/THESIS

It is hereby certified that BEE KAI YING (ID No: 19ABM00562) has completed this final year project/ dissertation/ thesis* entitled “Antecedents of Life Satisfaction and the Mediating Effects of Resilience: A Study of Working Adults from the Economic Perspective” under the supervision of DR. GO YOU HOW (Supervisor) from the Department of Economics, Faculty of Business And Finance, and DR. FOO CHUAN CHEW (Co-Supervisor)* from the Department of Economics, Faculty of Business And Finance.

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**ANTECEDENTS OF LIFE SATISFACTION AND THE
MEDIATING EFFECTS OF RESILIENCE: A STUDY OF
WORKING ADULTS FROM THE ECONOMIC
PERSPECTIVE**

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2021

ABSTRACT

The Malaysian government has recently targeted to achieve the status of high-income nation with better quality of life in the year 2025. Apparently, life satisfaction in Malaysia is still low, especially for those aged 20-39 years old. Therefore, this study aims to examine the determinants of life satisfaction among working adults aged 20-39 years old. In addition, this study also attempts to explore whether the resilience can mediate the relationship between determinants and life satisfaction. Data were collected from 384 respondents through self-administrative questionnaires. The SmartPLS Version 3.0 was used to perform the Partial Least Square of Structural Equation Modelling (PLS-SEM). In line with this, the results provide two notable findings. First of all, working adults' financial literacy is found to provide a positive impact on their life satisfaction. Financial literacy enables individuals to better allocate their lifetime resources and persist with the daunting process of financial management. As a result, their ability in their money management would increase their life satisfaction. Secondly, resilience is found to mediate the relationship between physical health status and life satisfaction. Resilience is one of the factors of enhancing health awareness that causes a quick response to change the health behaviour to cope with the stress in having a good healthy life. As a consequence, those with good health status could have a relatively low depression rate and increase work productivity, which contributes to satisfaction in their life. Based on the findings, this study suggests that the Malaysian Financial Planning Council could further improve their courses to enhance the

financial knowledge, financial attitude and training financial management behavior among working adults. In addition, the government is suggested to provide effective psychological interventions in the workplace. This includes promoting primary care prevention of physical ill-health among working adults in the country for the improvement of their life satisfaction.

Keywords: life satisfaction; financial literacy; resilience; Wilayah Persekutuan Kuala Lumpur (WPKL)

CHAPTER 1: INTRODUCTION

1.1 Overview

The chapter highlights the importance of life satisfaction by elaborating on the issue and main objectives. The explanation in the chapter is important so that the emphasis on the direction of the study can be placed.

1.2 Background of Malaysian Quality of Life

In 1957 before Malaysia's independence, Malaysia is one of the developing countries with per capita incomes below \$1,025 ([World Bank Group, 2019](#)). From 1960 to 1970, Malaysia's economic position was strong due to major primary commodities such as tin, petroleum, palm oil, and rubber ([Yusoff, Hasan & Jalil, 2000](#)). On top of that, in the early 1970, Malaysia started to plant more oil palms, leading Malaysia to become the largest producer and exporter of palm oil in the world. The total share of palm oil increased from 9.6% to 25% during the period of 1970 - 1980. Besides that, many high technology industries developed in Malaysia in the year of 1990 included advanced electronics, biotechnology, scientifically instruments, advanced

composite materials, software engineering, automated manufacturing systems, alternative energy and aerospace. Hence, Malaysia is considered ⁴⁶ a lower-middle-income country (per capita income between \$1,026 and \$3,995) during the period from 1990 to 2002 (World Bank Group, 2019).

In mid-May 1997, amid the Asian financial crisis, Malaysia has experienced an economic downturn. This crisis caused currency depreciation, the negative effect on wealth, decreasing trend in stock prices and the market of the property slump (Ariff & Abubakar, 1999). Resulting from this, inflation rate increased from 2.7% in 1997 to 5.3% in 1998, while unemployment rate increased from 2.5% in 1997 to 3.2% in 1998. As a result, the then-³⁶Prime Minister, *Yang Amat Berhormat* Tun Dr Mahathir Mohammad pegged the Malaysian currency at RM 3.80 per USD in order to reduce capital outflows from the country.

During the 1997/1998 Asian financial crisis, the Malaysian government drew concern to the residents' quality of life since the quality of life in the country is low. In this regard, the government has proposed Economic Planning Unit (EPU) in 1999 to pioneer the Malaysian Quality of life (MQLI), which measures the Quality of life of the residents (Dali, Sarkawi, & Abdullah, 2017). The EPU started with the series of its MQLI of 1999, 2002, and 2004. Since Malaysia progressed towards upper-middle-income economy, the MQLI was replaced by the Malaysian Well-being index (MWI) in 2011. The MWI constructed 14 components of economic and social well-being aspects,

such as housing, education, leisure, health, public safety, governance, social participation, income and distribution, culture, family, transport, environment, working life, and communications. In contrast, the MQLI included 11 components of economics and social life components: public safety, family life, housing, social participation, environment, income and distribution, transport and communications, education, health, and working life. Overall, the MWI report indicates that that level of well-being of the Malaysians had increased due to the development of the public policies and strategies. Furthermore, the incidence of poverty dropped from 5.5% in 2000 to 3.8% in 2009 (Muhammed & Haron, 2011; Chukwukere & Baharuddin, 2012). In 2003, Malaysia stood as one of the upper-middle income countries with per capita income between \$4,046 and \$12,535 (World Bank Group, 2020). During the period from 2000 to 2012, the MWI increased by 25.4 points with the growth rate of 1.9 % per annum (Malaysian Well-being Report, 2013). Due to foreign direct investment and manufacturing exports, exceptionally high technology products contributed 5% - 75% to Malaysia's total export (World Bank Group, 2019).

In lieu of “quality of life”, this study places an emphasis on “life satisfaction” as the measurement of subjective well-being as it is one of important factors of the individual’s general well-being (Gokalp & Topal, 2019). Life satisfaction refers to how people feel and think about their lives. Also, life satisfaction is the acceptance of the living in a standard, regardless of one’s personal satisfaction of life while quality of life is measured by specific standards which is more general (Yildirim, Kilic, & Akyol, 2013). On

top of that, ⁴⁴ life satisfaction is defined as individuals' ⁴⁵ evaluation of their lives as a whole, while quality of life refers to the general well-being (Yildirim et al., 2013). Several studies find that satisfaction of life is used to evaluate individuals' lives as a whole. On top of that, the satisfaction of life has also been used to measure the ⁴⁵ quality of life (Andrews & Withey, 1976; Campbell, 1976; George & Bearon, 1980; Calman, 1987). Besides that, the aspects of life satisfaction include goal achievements, social aspirations and materials (Haller & Hadler, 2006; Diener & Ryan, 2009). These aspects can be influenced by job, income, educational, gender, marital status, relationships, environment, health, emotional and other personal-related matters (Celinska & Olszewski, 2013; Banjare, Dwivedi, & Pradhan, 2015; Ackerman, 2021). Also, individuals' satisfaction of life can be influenced by their emotional conditions (Woo, kim & Uysal, 2016).

In Malaysia, the area of WPKL is a competitive work and living place with high costs of living. As a consequence, the targeted working adults aged 20-39 years old are likely to face work-related stress and have financial worries (Schulenberg et al., 2004). Meanwhile, older working adults are less likely to worry about this as many of them have established good careers, families, achievements and confidence in themselves (Cardiac Screen Ltd, 2019). Therefore, those working adults aged 20-39 years old tend to encounter several mental health related problems, such as depression and negative emotion, thus they are prone in misusing illegal or prescription drugs and excessive alcohol consumption (The Star, 2019). Sometimes, stress that is persistent or overwhelming could seriously damage individuals' mental health.

Therefore, resilience is recognized as an important attribute for individuals in handling depression, stress, or tense situations. As a result, those people who are resilient tend to have a good, pleasant and meaningful life (Cohrs, Christie, White & Das, 2013).

Resilience and life satisfaction are closely related. Those individuals who have psychological resilience could think rationally in confronting adversities and solving problems, and discipline themselves by carrying out responsibilities in their daily lives (Mcknight et al., 2002). Resilient persons are able to face any uncertainties, adapt to life challenges and maintain better life satisfaction (Leppin et al., 2014; Zeti, 2018). Adults need to develop their resilience to handle any adversities, work-related stress and experiences with their open minds in their working life (Gentle, 2019). On top of that, Malaysians are found to be flexible and adaptable although they are facing many psychological challenges, thereby solving the adversities effectively (Ting & Foo, 2018; Zeti, 2018).

Resilient people who have a positive rather than negative attitude prefer to choose a more balanced and positive outlook on their lives. In turn, they demonstrate better problem-solving with their knowledge potential and motivation. However, to the best of our knowledge, the existing literature places an emphasis on earlier determinants of life satisfaction (Daniel & Brown, 2016; Hasibuan, Lubis & Altsani-HR, 2018; Lee & Lee, 2019; Jovanovic & Joshanloo, 2019; Ilies, Yao, Curseu & Liang, 2019; Ngoo, Tan

& Tey, 2020; Dahiya & Rangnekar, 2020). Little is known about the role of resilience as a mediator in influencing life satisfaction among working adults in metropolitan areas. Those residents in the metropolitan area tend to feel more stressed, pressured or depressed as the area provides high costs of living and a competitive workplace (Haart, 2019). To better explain the role of resilience, this study attempts to examine the mediating effect of resilience on working adults' life satisfaction. The increase of resilience among working adults is the priority for the country to develop resources for the improvement of residents' standards of living (Abolghasemi & Taklavi-Varaniyab, 2010).

1.3 Problem Statement

Recently, the Malaysian government has targeted to achieve the goal of becoming a high-income nation with better quality of life in 2025. The development has caused many working adults to encounter mental health problems, including stress, depression, mental illness and chronic diseases. This consequently reduces their life satisfaction. Hence, the prevalence of Malaysians' mental health problems was increased from 10.7% in 1996 to 29.2% in 2016 (National Health and Morbidity Survey, 2015; Chua, 2020). Mental health problems affect individuals' physical health, financial, education, work performance and daily living (Michelle, 2000). During the period from 2011

to 2017, the percentage of Malaysians who encounter mental health problems due to the rate of depression and anxiety disorder has increased from 12% to 29% (National Health and Morbidity Survey, 2018; The Star, 2018; Othman & Essau, 2019). Because of the high prevalence, anxiety, depression and stress have become the central issues among working adults especially for those living in the metropolitan areas such as Malaysian capital town, namely the ³³ Kuala Lumpur Federal Territory or *Wilayah Persekutuan Kuala Lumpur* (WPKL).

Physical health status is one of the important factors in influencing life satisfaction among working adults in the WPKL. In 2015, this metropolitan was recorded to have 39.8% of residents who are prone to suffer from depression and anxiety disorders as compared to other major cities across the country's states (National Health and Morbidity Survey, 2015). As shown in Table 1.1, in 2019, the WPKL was listed as the fourth most overworked cities in the world with the high depression rate (The Star, 2019; Ng, 2019). Most adults who are overworking are causing stress to their minds and body, subsequently leading to their poor physical health status. Their poor physical health status would decrease their ability in performing their daily tasks. Hence, their work productivity tends to be low and financial status becomes unstable, thereby reducing the level of their life satisfaction.

Table 1.1: Top overworked cities by ranking (work intensity scores)

	Scores
Tokyo, Japan	100
Singapore, Singapore	95.4
Washington DC, USA	93.4
Kuala Lumpur, Malaysia	93.3

Source: [Ng \(2019\)](#)

Note: Work intensity score is about hours worked per week, arrival at work, minimum vacations offered, vacations taken, amount of paid maternal and parental leave (days), unemployment rate, and time spend on commuting.

Besides, workers' educational attainment is also a targeted factor of life satisfaction. As reported, 79% of the workers in the WPKL have education attainment at the tertiary level ([Jabatan Perangkaan Malaysia, 2021](#)). As established, educated workers are able to achieve higher productivity, thereby contributing to a better standard of living. However, some educated workers have high expectations in order to cover their high cost of living in the WPKL. The cost of living in WPKL is twice higher than other states in Malaysia. As a consequence, 22% of employees become stressed as they have many financial adversities ([AIA Vitality, 2019](#)). As shown in [Table 1.2](#), WPKL was recorded to have the highest growth rate of consumer price index at 1.4% in 2018 and 1.2% in 2019 with a rise in the prices of non-alcoholic beverages and food by 4.5% in 2018 and 5.7% in 2019, respectively ([Department of Statistics Malaysia, 2019](#)). As a result, the current cost of living index of 93 for WPKL as shown in [Table 1.3](#) is found to rank the highest in Malaysia ([Expatistan, 2022](#)). Since the WPKL area is a business and financial centre, the government provides many incentives to offer investment opportunities for developing infrastructure and a financial hub, thereby increasing the costs of living in that area ([Schlomach, 2017](#)).

Table 1.2: Consumer price index in Malaysia by state, 2018-2019

	Overall (2018)	Overall (2019)	Food & Non- Alcoholic Beverages (2018)	Food & Non- Alcoholic Beverages (2019)
Wilayah Persekutuan Kuala Lumpur	1.4	1.2	4.5	5.7
Pulau Pinang	0.9	1.1	2.4	3.7
Johor	1.1	0.6	2.3	3.7
Selangor	1.1	0.9	2.2	4.6
Terengganu	0.4	0.1	2.0	3.7
Perak	0.7	0.6	1.9	3.6
Negeri Sembilan	1.2	0.7	1.8	3.3
Melaka	0.8	0.1	1.7	2.6
Kelantan	0.7	0.4	1.6	2.9
Pahang	0.6	0.3	1.5	3.3
Kedah & Perlis	0.3	0.2	0.9	1.4

Source: [Department of Statistics, Malaysia \(2019\)](#)

Table 1.3: Cost of living index by cities in Malaysia, 2022

Ranking		
1 st	Wilayah Persekutuan Kuala Lumpur	93
2 nd	Kota Kinabalu	84
3 rd	Johor Bahru	82

Source: [Expatistan \(2022\)](#)

Furthermore, financial situation is one of the factors in determining working adults' life satisfaction. On average, employed graduates and households in the WPKL are recorded to have the median incomes of RM5,471 and RM10,549, respectively ([Department of Statistics Malaysia, 2019](#)). However, their financial situation could not be sufficient for them to cover their high living costs ([Department of Statistics Malaysia, 2019](#)). To offset the high living costs, they always tend to be frugal in making their financial-related decisions by applying loans from financial institutions ([Financial Economics Network, 2019](#)). Based on [Table 1.4](#), the WPKL is recorded to have the highest non-performing loans with a total of RM417,859,000 as compared to other areas in Peninsular Malaysia, Sabah and Sarawak ([Alliance Bank, 2019](#)). Also, the highest non-performing loans with

the amount of RM329,112,000 happened in the WPKL ([Affin Bank, 2018](#)). Therefore, those people who have a lack of financial literacy are likely to make a poor financial decision, resulting in many of them struggling to keep up with payments, such as revolving credit and taking out mortgages that they could not afford ([Santos & Abreu, 2009](#); [Zeti, 2018](#)).

Table 1.4: Non-performing loans by geographical regions in Malaysia

Banks		RM'000
Alliance	Central region	417,859
	Southern region	65,560
	Northern region	34,658
	Sabah region	24,263
	Sarawak region	9,512
Affin	Wilayah Persekutuan Kuala Lumpur	329,112
	Selangor	92,175
	Negeri Sembilan	16,478
	Pahang	15,544
	Kedah	8,550

Source: [Annual report of Alliance & Affin Bank \(2018\)](#)

The non-performing loan could contribute to the increasing number of bankruptcy cases. For example, new bankruptcies in the WPKL had increased by 8,0625 cases during the period of 2015 - 2019 ([Malaysian Department of Insolvency, 2019](#)). Personal loans have contributed to 27.76% of bankruptcy cases. Then, there were cases of hire purchase vehicles that contributed to 24.73% of bankruptcy. Next, 14.09% and 9.91% of bankruptcies were due to housing loans and debts of using credit cards, respectively ([Malaysian Department of Insolvency, 2019](#)).

As shown in [Table 1.5](#), the highest percentage of bankruptcy cases is recorded to happen in the WPKL with 2.66% of the population. Malaysian youths generally lack the financial literacy which indicates that they do not have money management knowledge, perhaps mirrored by 30% of EPF members

withdrawing almost all of their savings from the first account (Alias, 2021) and 84% of them typically used their savings to cover their daily expenses at the end of the month (National Strategy for Financial Literacy, 2019). People with **5** financial literacy have the ability to understand and effectively use various financial skills, thus they use the financial knowledge to have a proper financial planning and maintain a stable financial situation in order to survive in a competitive workplace with high costs of living.

Table 1.5: Bankruptcy cases by states, Malaysia

	Cases	Population	Percentage
Wilayah Persekutuan Kuala Lumpur	47591	1790000	$\frac{47591}{1790000} = 2.66\%$
Johor	51130	3760000	$\frac{51130}{3760000} = 1.36\%$
Penang	21976	1770000	$\frac{21976}{1770000} = 1.24\%$
Selangor	74182	6480000	$\frac{74182}{6480000} = 1.14\%$
Melaka	9116	930000	$\frac{9116}{930000} = 0.98\%$
Perak	20878	2510000	$\frac{20878}{2510000} = 0.83\%$
Negeri Sembilan	8692	1130000	$\frac{8692}{1130000} = 0.77\%$
Kedah	15100	2180000	$\frac{15100}{2180000} = 0.69\%$
Pahang	11097	1670000	$\frac{11097}{1670000} = 0.66\%$
Perlis	1148	250000	$\frac{1148}{250000} = 0.46\%$
Kelantan	8431	1890000	$\frac{8431}{1890000} = 0.45\%$
Terengganu	5377	1250000	$\frac{5377}{1250000} = 0.43\%$

Source: [Malaysia Department of Insolvency \(2018\)](#)

From the problems mentioned above, those people who have resilience skills might establish positive mental health that contributes to better physical health status, thereby improving their financial literacy to maintain a better financial situation and subsequently, obtain better job promotion. In line with this, resilience is important to mediate the financial literacy, financial situation,

physical health status, educational attainment, and employment policy to ensure life satisfaction among working adults in WPKL.

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1.4 Research Questions

This study attempts to investigate the determinants that directly or indirectly influence the working adults' life satisfaction in WPKL. A total of 10 research questions has been designed.

- i) Is there a significant relationship between the financial literacy and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- ii) Is there a significant relationship between the financial situation and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- iii) Is there a significant relationship between the physical health status and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- iv) Is there a significant relationship between the educational attainment and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?

- i) Is there a significant relationship between the employment policy and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- ii) Does resilience mediate the relationship between the financial literacy and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- iii) Does resilience mediate the relationship between the financial situation and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- iv) Does resilience mediate the relationship between the physical health status and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- v) Does resilience mediate the relationship between the educational attainment and life satisfaction among working adults in Wilayah Persekutuan Kuala Lumpur?
- vi) Does resilience mediate the relationship between the employment policy and life satisfaction among working adults in the Wilayah Persekutuan Kuala Lumpur?

1.5 Research Objectives

The main objective for the study is to identify the determinants of life satisfaction with the mediation effect of resilience. To achieve this, the study establishes the following 10 specific objectives.

- i) To investigate if there is a significant relationship between financial literacy and life satisfaction among working adults.
- ii) To investigate if there is a significant relationship between financial situation and life satisfaction among working adults.
- iii) To investigate if there is a significant relationship between physical health status and life satisfaction among working adults.
- iv) To investigate if there is a significant relationship between educational attainment and life satisfaction among working adults.
- v) To investigate if there is a significant relationship between employment policy and life satisfaction among working adults.
- vi) To investigate if resilience mediates the relationship between financial literacy and life satisfaction among working adults.
- vii) To investigate if resilience mediates the relationship between financial situation and life satisfaction among working adults.
- viii) To investigate if resilience mediates the relationship between physical health status and life satisfaction among working adults.

- ix) To investigate if resilience mediates the relationship between educational attainment and life satisfaction among working adults.
- x) To investigate if resilience mediates the relationship between employment policy and life satisfaction among working adults.

1.6 Significance of Study

The findings from the study are expected to provide insights on the determinants that affect working adults' life satisfaction in the context of metropolitan area. Besides, the findings can serve as the reference for policymakers to implement some effective plans and programs of improving working adults' life satisfaction. Policymakers can implement some courses to improve individuals' financial decision-making skills for saving, investing, spending and lending. A better financial literacy can lead them to have a better life in the present and future.

For further improvement in explaining life satisfaction, this study attempts to examine the mediating effect of resilience on working adults' life satisfaction. For example, resilient working adults would use their skills or resources to manage their health behaviours, thereby contributing to good physical health status and, in turn, increasing workers' productivity. As higher

productivity would increase the wages and economic growth, workers with positive health status could have a better living standard and this will indirectly increase their life satisfaction.

However, most past studies are found to target the elderly or those who have entered late adulthood. In order to provide a comprehensive understanding on determinants of life satisfaction among individuals with a range of age groups, this study attempts to focus on working adults aged 20-39 years old who live in the metropolitan area. Therefore, this research is also beneficial to the working adults themselves to understand the importance of the factors that influence their life satisfaction when they are 20-39 years old. They can pay attention to which factors that influence their satisfaction of life and take note of the factors in order to improve their lives. As the examples, they can learn how to plan budgets for long-term saving to own properties, build a retirement nest egg, also manage and pay off their debts.

1.7 Chapter Layout

The layout of the thesis is arranged as follows. Chapter 2 provides the review of the existing literature on life satisfaction. In Chapter 3, the sample size, sampling location, and data and methodology used are explained. In Chapter 4, the discussion on the empirical results is provided. Lastly, Chapter 5 touches on

the summary of the main finding, provides some theoretical and practical implications for the different parties and offers the recommendations of the study.

1.8 Conclusion

This chapter places an emphasis on the direction of the study by looking into determinants of life satisfaction among working adults residing in a Malaysian metropolitan area. The direction is supported with problem statement, research questions and research ³⁹ objectives. In line with the direction, the expected findings of the study are useful for policymakers in designing various programs that enhance the level of life satisfaction among Malaysians, especially for the working adults.

CHAPTER 2: LITERATURE REVIEW

2.0 Overview

Currently, life satisfaction is one of the most favourite research areas among scholars where they evaluate the standard of living in the targeted country (Ginevra, Magnano, Lodi, Annovazzi, Camussi, & Patrizi, 2018; Russo-Netzer, Horenczyk, & Bergman, 2019). Life satisfaction is defined as individuals' perception on their life quality in terms of their age, gender, physical health status, behaviour, availability of social support, cultural background, education attainment and financial management (Seibel & Johnson, 2001; Chow, 2005; Bhandari, 2012).

Furthermore, it also influences many aspects of individuals' lives. For example, those individuals who have high level of life satisfaction could positively contribute to their job performance, mental health and physical health (Siahpush, Spittal, & Singh, 2008; Barger, Donoho, & Wayment, 2009; Erdogan, Bauer, Truxillo, & Mansfield, 2012; Lee, 2017).

2.1 Theoretical Framework

The bottom-up theory is developed by [Kinchla and Wolfe \(1979\)](#). According to this theory, [Seibel and Johnson \(2001\)](#), [Schimmack and Oishi \(2005\)](#), [Chow \(2005\)](#) and [Bhandari \(2012\)](#) state that individuals' perceptions are based on finance, health, education, social support, relationship, and other personal-related matters to promote their overall life satisfaction. The different perceptions are shown in [Figure 2.1](#).

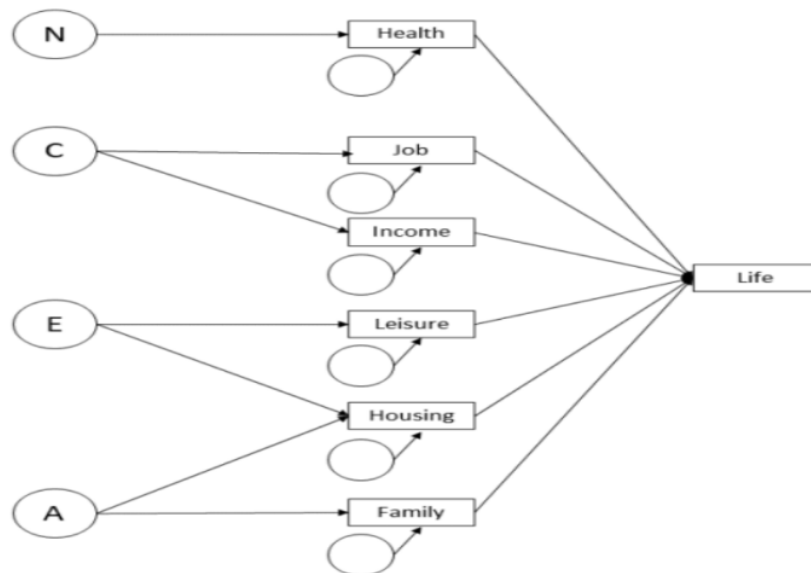


Figure 2.1: An Example of Bottom-Up Theory on Life Satisfaction

Source: [Diener \(1984\)](#)

Furthermore, [the bottom-up theory](#) was firstly implemented by [Diener \(1984\)](#) into the study of life satisfaction. The author states that life satisfaction is simply the sum of many small aspects (bottom-up theory). Based on the author's view, individuals could evaluate their life satisfaction according to their personal matters in terms of finance, health, education, relationship, social support and environment ([Heller, Illies, & Watson, 2006](#)). The author's view is shown in [Figure 2.2](#)

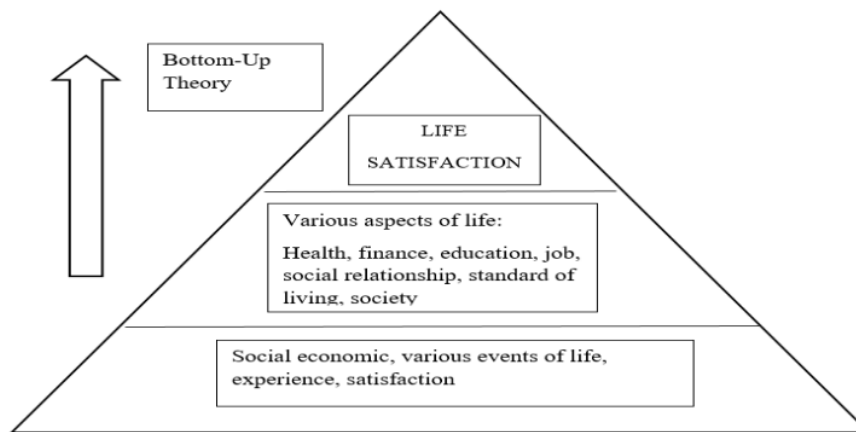


Figure 2.2: Bottom-up theory of life satisfaction model
Source: [Diener \(1984\)](#)

The bottom-up theory had been widely used to illustrate the concept of life satisfaction ([Diener, 1984](#); [Krause & Jay, 1991](#); [Heady et al., 1991](#); [heller & Watson, 2004](#); [Loewe, Bagherzadeh, Luis, Thieme, & Joan, 2014](#); [Gan, Ong, Lee, & Lin, 2020](#)). In other words, evaluating individuals' life satisfaction is based on different domains of factors (personal-related matters). For example, those individuals that have a better education level could enhance their job or

promotion opportunities, thereby contributing to better financial performance. This could allow them to achieve financial stability that reduces the level of their stress, depression and anxiety (Schulenberg et al., 2004). As a result, they are prompt to enjoy higher level of life satisfaction. Referring to the study by Heller et al., (2006), job and health satisfaction are main determinants that influence individuals' life satisfaction.

As stated by Schulenberg et al. (2004), younger working adults are generally facing various challenges in the workplace due to the highly competitive environment. Under such environment, most working adults do not find it easy to attain their life satisfaction. Furthermore, Sanci (2018) finds that those working adults are prone to committing risky behaviours such as drug abuse, excessive alcohol consumption and smoking as well as mental illnesses like depression and anxiety due to the lack of life satisfaction. Therefore, they need to have resilience as an essential attribute for handling complex and tense situations in their lives. Mcknight, Huebner, and Suldo (2002) and Gan et al. (2020) state that those individuals with resilience skills would tend to cope with adversities and challenges in the workplace.

In other words, Ting and Foo (2018) also Jovanovic and Joshanloo (2019) state that working adults who possess psychological resilience could think rationally to avoid risky and unhealthy behaviours, thereby lowering their tendency to get ill, stressed or depressed. In turn, their ability to handle problems effectively tends to increase their job promotion, leading to a higher life

satisfaction level. In the context of Malaysia, [Ting and Foo \(2018\)](#) and [Zeti \(2018\)](#) find that individuals could be flexible and adaptable although they face many psychological challenges in solving the adversity effectively. Various aspects of life as predictors in past studies are summarized in [Table 2.1](#).

Table 2.1: Various aspects of life as predictors in past studies

Author	Health	Financial situation	Education	Financial literacy	Employment policy
Flanagan (1978)	✓				✓
Medley (1980)		✓			✓
Krause (1991)	✓	✓			
Argyle (2001)	✓	✓			
Lee et al. (2002)	✓	✓			
Flouri & Buchanan (2003)			✓		
Schulenberg et al. (2004)	✓	✓	✓		
Fujita & Diener (2005)			✓		
Rojas (2006)	✓	✓			
Swami et al. (2007)	✓				
Amah (2009)					✓
Hoorn (2009)					✓
Kapteyn et al. (2009)		✓			
Shim et al. (2009)		✓		✓	
Whiteley et al. (2010)					✓
Daraei & Mohahery (2012)			✓		
Howell et al. (2012)		✓			
Taft et al. (2013)		✓		✓	
Loewe et al. (2013)	✓	✓	✓		
Angelini et al. (2014)	✓		✓		
Amaike (2014)			✓		
Carr & Chung (2014)					✓
George et al. (2014)		✓			
Knoll & Pirlík (2014)					✓
Ngoo et al. (2014)			✓		✓
Ali et al. (2015)		✓		✓	
Clement & Sauer (2015)	✓				
Tariq (2015)		✓			
Boo et al. (2016)			✓		
Daniel & Brown (2016)		✓			
Hoskins & May (2016)	✓				
Lam et al. (2016)			✓		
Yap et al. (2016)		✓		✓	
Ngamaba (2016)	✓	✓			
Hassibuan & Lubis (2017)				✓	
Barand & Imanian (2017)				✓	
Thelma (2017)	✓				
Zanjani et al. (2017)	✓				
Yiap & Geetha (2017)	✓				
Kasmaoui & Bourhaba (2017)	✓				
Goel et al. (2018)	✓				
Hornsery et al. (2018)	✓				

Park et al. (2019)	✓				
Ilies et al. (2019)	✓				
Jovanovic & Joshanloo (2019)	✓				
Pan et al. (2019)	✓				
Lee & Lee (2019)	✓				
Ngoo et al. (2020)	✓				
Dahiya & Rangnekar (2020)	✓				
Mowisch et al. (2020)	✓				
Wang et al. (2020)	✓				
Han & Kim (2021)					✓
Pollmann-Schult (2021)				✓	
Muhammad & Joy (2022)	✓	✓		✓	
Tavares (2022)	✓			✓	
Kasiker & Peker (2022)	✓				

Source: Developed for study

2.1.1 The Influence of Financial Literacy on Life Satisfaction

[Shim et al. \(2009\)](#) use AMOS 6.0 to analyse financial literacy and life satisfaction in the South-western United States. They find that individuals' financial literacy significantly relates to their life satisfaction. As a result, they could budget, manage and plan their saving for any emergencies that would help them to avoid financial scam and fraud. Next, [Taft, Hosein, Mehrizi and Roshan \(2013\)](#) state that people who have financial knowledge can increase their savings, asset management, correct purchase decisions and investing, and embark upon economic activities to improve their life satisfaction. Furthermore, [Ali, Rahman, and Bakar \(2015\)](#) demonstrate that individuals also need to manage and plan their finance correctly because they may face some financial adversities in their lives.

In Kelurahan Sepanjang Jaya, Bekasi, [Yap et al. \(2016\)](#) attempt to examine the effect of residents' financial literacy towards their financial situation and quality of life. Their findings indicate that financial literacy significantly influences the financial situation to ensure the quality of life. When individuals correctly manage their finance, they would have better-living conditions. In the case of Indonesia, [Hassibuan and Lubis \(2017\)](#) find that those individuals with financial knowledge would develop good financial management to avoid financial scam and fraud, thereby obtaining greater life satisfaction. [Barand and Imanian \(2017\)](#) also state that well-managed finance could meet the goals and needs or a way to reach better life satisfaction. Besides

that, [Ilies, Yao, Curseu and Liang \(2019\)](#) further indicate that financial literacy influences financial behaviour and predicts better financial performance. Lastly, [Han and Kim \(2021\)](#) demonstrate that financial literacy could help workers with disabilities in accumulating the assets for their future development. Thus, through the assets, it can enhance the life satisfaction of workers with disabilities. As a result, their money management skill would boost their life satisfaction.

The majority of studies demonstrate that individuals' life satisfaction could be positively related to financial literacy. For instance, [Shim et al. \(2006\)](#), [Taft et al. \(2013\)](#), [Ali et al. \(2015\)](#), [Yap et al. \(2016\)](#), [Barand and Imanian \(2017\)](#), [Hassibuan and Lubis \(2017\)](#), [Ilies et al. \(2019\)](#) and [Han and Kim \(2021\)](#). Those individuals blessed with better knowledge about financial-related matters would be able to manage their financial budgeting properly in reducing their financial burdens and avoiding financial scam and fraud. This eventually improves their life satisfaction. The higher the level of financial literacy, the higher the level of life satisfaction. This leads to the following H_1 .

H₁: Higher level of financial literacy positively influences life satisfaction.

In the case of the United States of America, [Cohn, Fredrickson, Brown and Mikels \(2009\)](#) find that individuals' resilience could mediate the relationship between their financial literacy and life satisfaction. This finding suggests that the resilient ones would feel better and be more satisfied with their

lives because they would use their financial knowledge to develop sound financial resources as the recipe for living well. Next, Richards (2014) performs the analysis of the multilevel model. The author's results indicate that an emergency situation may influence the personal financial situation. Hence, a poor financial situation can affect their materials of well-being.

The findings by Cohn et al. (2009), Richards (2014), Muir et al. (2016), Muir, Reeve, Connolly, Marjolin, Salignac, and Ho (2016), Maison (2019) and Jayasinghe et al. (2020) demonstrate that those equipped with resilience skills could control or manage their financial literacy and access external resources to obtain financial adversity. In turn, their higher financial capability tends to generate life satisfaction in general. Also, William (2007), Rothwell et al. (2016) and Maison (2019) state that improving resilience could develop good financial behaviour of people to promote their financial literacy and improve their financial decision-making skills. In the context of Australia, Jayasinghe, Selvanathan and Selvanathan (2020) apply the ordered logit model and find that people without resilience skill would encounter problems in accessing financial services, thereby leading to a low level of life satisfaction. In short, resilient people can improve their financial literacy level, hence enhancing their life satisfaction level. This fact prompts the following H₂.

H₂: Financial literacy is mediated by resilience towards life satisfaction

2.1.2 The Influence of Financial Situation on Life Satisfaction

In Terre Haute, [Medley \(1980\)](#) finds that the relationship between financial situation and life satisfaction is significant for men aged 65 years old and above, while this relationship is insignificant for women aged 65 years old and above. Men's life satisfaction tends to be linked with their age, but women's apparently, is not. In the Netherlands and the United States, [Kapteyn et al. \(2009\)](#) find that individuals' income or financial situation positively relates to their life satisfaction. In Malaysia, [Howell et al. \(2012\)](#) use the World Values Survey to demonstrate that education and financial situation are significant predictors of life satisfaction. Their findings show that more educated individuals tend to have high job opportunities in improving their financial situation and this indirectly enhances their life satisfaction.

Additionally, [Daniel and Brown \(2016\)](#) apply the fixed effects ordered logit model in West and East Germany to ascertain the impact of monetary financial position and a household's subjective overall life satisfaction. Their results show that net wealth positively affects the overall satisfaction of life. When households are suffering from financial concern, they are likely to reduce their daily needs. As a consequence, their life satisfaction would be negatively affected. In Serbia, [Jovanovic and Joshanloo \(2019\)](#) find that financial situation could provide a dominant effect on life satisfaction, where a poor financial situation could reduce individuals' satisfaction in a large city. It is not surprising

that lower level of life satisfaction has been found among individuals who are residing in the rural area than those who are residing in the urban areas.

[Ngamaba \(2016\)](#) uses a multivariate analysis regression model to investigate the relationship between financial situation and life satisfaction. The author's finding indicates that a better financial situation may result in an enhancement in living conditions such as enhanced nutrition, quality of food, health status, also education opportunities. In India, [Muhammad and Joy \(2020\)](#) use the same method and their finding demonstrates that maintaining a good health status and household-related factors are controlled by financial status. Therefore, poor financial status is significantly negatively associated with life satisfaction.

However, [George, Okun and Landerman \(2014\)](#) also use the same technique to analyse the life satisfaction among youths in the context of South-Eastern United States. They find that the average income among those working adults aged between 25 and 44 years old could indirectly relate to their social activities, while the average income for those working adults aged 45-64 years old could indirectly relate to their health and leisure activities. In Karachi, [Tariq \(2015\)](#) finds a negative relationship between the financial situation and life satisfaction as he applies the correlation method. The author's finding implies that people who have higher income tend to seek for luxurious lifestyle. Therefore, they would have a higher expectation in their spending. This would make them encounter financial stress, thereby automatically reducing their life satisfaction.

Medley (1980), Kapteyn et al. (2009), Howell et al. (2012), Daniel and Brown (2014), Ngamaba (2016), Jovanovic and Joshanloo (2019) and Muhammad and Joy (2022) posit that individuals' financial situation positively influences their life satisfaction. Those individuals who have financial stability could reduce their financial concerns. When they do not suffer from their financial stress, they would not reduce their daily needs or live frugally. As a result, they could enjoy better living conditions and this improves their life satisfaction. This fact prompts the following H₃.

H₃: *Better financial situation positively influences life satisfaction.*

Rossi and Bisconti (2007) hypothesize that resilience could act as a mediator in the financial situation and satisfaction of living in the United States. They use the analysis of variance to perform the hypothesis testing. Their results show that resilience could significantly mediate the ⁴⁷relationship between financial situation and satisfaction of life. To survive, people who have resilience skills could find effective ways to improve their commitment in order to offset the financial stress that threatens their mental state. As a result, they can maintain the low ratio of debt to income with financial stability in their lives.

In the United States, Faircloth (2017) uses the cross-sectional and correlation design to demonstrate that resilience could act as a mediator to link

stressful life experience and well-being. The author suggests that resilient people could recover their financial problems by seeking for effective ways to overcome their financial problems. Consequently, they could enjoy financial stability and greater life satisfaction. [Salignac et al. \(2019\)](#) also imply that those with resilience skills would have better knowledge on financial-related matters in order to improve their financial situation from time to time. Better financial performance could increase the living conditions. With such advantages in life, they can achieve better life satisfaction.

[Rossi and Bisconti \(2007\)](#), [Faircloth \(2017\)](#) and [Salignac et al. \(2019\)](#) demonstrate that the financial situation is mediated by the resilience towards life satisfaction. Those individuals who are resilient tend to recover their financial problems from adverse events. They could find an effective and efficient way to obtain resources to be used for their investments in overcoming their financial adversity, thus improving their financial well-being and life satisfaction. As a result, people with resilience skill can maintain their financial stability, therefore enjoying greater life satisfaction. This leads to the following [H₄](#).

H₄: *Financial situation is mediated by resilience towards life satisfaction.*

2.1.3 The Influence of Physical Health Status on Life Satisfaction

In the context of Malaysia, [Swami et al. \(2007\)](#) examine the relationship between physical health status and life satisfaction. Their findings indicate that the stress leads to a low health status. Apart from this, medical expenses could contribute to financial problems, thereby reducing life satisfaction. In the context of Northern Italy, [Angelini et al. \(2014\)](#) use the robust unpacking effect. The authors' result shows that the life domain positively affects the satisfaction of life. People with good health status would have a better social lifestyle, thereby improving their life satisfaction level.

In the case of the United States, [Clement and Sauer \(2015\)](#) employ the adjusted multinomial logistic regression model to quantify the connection between life satisfaction and healthcare. Their findings indicate that the quality of perceived health is the most salient predictor of life satisfaction. People who have health problems tend to have lower satisfaction of life than those who do not have health problems. The reason to support their finding is lower work rate results in the poor performance of workers, and this ultimately affects the quality of goods and services. Eventually, their life satisfaction would be negatively affected.

In the context of Australia, Middle East and North Africa, ²⁶Asia, Eastern Europe and Former Soviet Union, Sub-Saharan Africa, Western Europe, North America, America, and Latin, Ngamaba (2016) performs the multivariate data analysis. The author's result indicates that health is positively associated with happiness of life, so broadly speaking, healthier people tend to have more satisfaction with their lives. Furthermore, in the case of Canada, Hoskins and May (2016) use the ordered logistic and generalized ordered logistic regression. Their results indicate that health status is essential for life satisfaction. People with good health status could contribute to higher gross domestic products, suggesting that healthier people could increase their productivity and consume more goods and services to maximize their utilities.

Additionally, Thelma (2017) demonstrates that regular exercise can help avoid depression and anxiety and improve sleep, reduce mental disorders and stress. This subsequently improves their overall life satisfaction level. Goel et al. (2018) conduct an adjusted multinomial logistic regression model, and the result shows that health is positively related to life satisfaction. Their finding implies that those people who suffer from stress and depression tend to undertake risky behaviour by consuming excess alcohol. Hence, their life satisfaction decreases as well. As a result, those dissatisfied in life may live in poor socioeconomic conditions and have poor health status. Also, Pan et al. (2019) state that individuals who have a relatively good physical health status are more likely to live independently and perform well in basic or instrumental activities when dealing with their daily living tasks.

According to [Jovanovic and Joshanloo \(2019\)](#), billions of people around the globe are suffering from chronic illnesses. For those individuals who appear to suffer from their chronic illnesses, they do not seem to be able to enjoy their lives when it comes to performing certain jobs. [Wang, Liu, Pu, Li, Guo, Feng, Huang, Ghose, Ji and Tang \(2020\)](#) state that the improved healthcare system could enhance health status. In the case of Guyana, they perform the multivariate analysis and find that 95.4% of the participants have greater life satisfaction.

[Swami et al. \(2007\)](#), [Angeline et al. \(2014\)](#), [Clement and Sauer \(2015\)](#), [Hoskins and May \(2016\)](#), [Ngamaba \(2016\)](#), [Goel et al. \(2018\)](#), [Pan, Chan, Xu and Yeung \(2019\)](#), [Jovanovic and Joshanloo \(2019\)](#), and [Wang et al. \(2020\)](#) demonstrate that physical health status has a positive relationship with life satisfaction. The health status of the human is very important, as a poor healthy life can take a toll on your life satisfaction (happiness) and increase your stress levels. To conclude, better health status can improve the level of life satisfaction. This leads to the following H_5 .

H_5 : *Better physical health status positively influences life satisfaction.*

Next, [Liang, Wu, and Yang \(2016\)](#) find that those with good health status could have a relatively low depression rate and work productivity increase, which contributes to the satisfaction in their lives. In the context of China, [Shi et al. \(2015\)](#) perform the analysis by applying the hierarchical linear regression

model. They find that resilience partially mediates the relationship between physical health status and life satisfaction. Their finding supports that resilience is one of the factors behind the enhancement of health awareness- it causes a quick response to cope with the stress, further leading to a good healthy life. [Yang, Xia, Han, and Liang \(2018\)](#) find that resilient people could control and maintain their health behaviour and lower their physical and mental health problems by solving difficult situations, thereby contributing to higher social support. [Yildirim \(2019\)](#) also finds that those with high resilience have a lower fear of happiness. All these benefits will enhance their life satisfaction levels. In short, [Kasiker and Peker \(2022\)](#) suggest that those with a higher level of resilience are more likely to experience fewer mental and physical health problems.

Several studies for instance, [Wang and Wang \(2014\)](#), [Xie and Deng \(2014\)](#), [Feng and Wan \(2016\)](#), [Yang et al. \(2018\)](#) and [Kasiker and Peker \(2022\)](#) demonstrate that physical health status is mediated by the resilience on life satisfaction. Higher resilience could reduce stress or emotion of life, thus maintaining the individual's health status and improving life satisfaction. This fact prompts the following [H₆](#).

H₆: Health status is mediated by resilience towards life satisfaction.

2.1.4 The Influence of Educational Attainment on Life Satisfaction

With the application of the ANOVA method, [Flouri and Buchanan \(2003\)](#) demonstrate that educational attainment has a negative relationship with life satisfaction. Their finding implies that for the highly educated they usually could not meet their high expectations. Then, their high expectation would offset their psychological well-being. In the United States and Great Britain, [Fujita and Diener \(2005\)](#) find that educational attainment and life satisfaction are negatively related. Their finding implies that those educated retirees could not familiarise themselves with the life style of relaxing without any commitments where it can result in the low satisfaction in their lives. They prefer to have a competitive job market to show their market value whereas when they leave the workplace, they feel that they are losing the market value. [Collins, Sarkisian, and Winner \(2009\)](#) find that highly educated people would be more nervous, afraid, and aroused than those lower educated people due to the high expectations. Hence, it would negatively affect their life satisfaction. Also, [Hornsey et al. \(2018\)](#) state that high-educated employees and a high income do not report greater life satisfaction due to stressful competitive workplace.

In the case of India, [Daraei and Mohahery \(2012\)](#) conduct an ethnographic observation and in-depth interview in Mysore. Their finding shows that education is linked to life satisfaction because a good education

background has more employment options so people with this background tend to get well-paid jobs. Also, an educated person would have good habits and skills to maintain their life satisfaction. In Lagos, [Amaike \(2014\)](#) employs the multi-stage systematic sampling method to examine the retirees' education effect on the satisfaction of life. Their finding indicates that education and life satisfaction are significantly associated because retirees who are highly educated tend to have better life satisfaction and health status than those retirees who are not highly educated. In Malaysia, [Boo, Yen, and Lim \(2016\)](#) apply the ordered logit regression to demonstrate that those who have primary education have lesser life satisfaction than those who have tertiary education. A higher education level would allow individuals to have job opportunities and earn high income, leading to greater life satisfaction. Therefore, it can be pointed out that individuals could increase their life satisfaction through education ([Ngoo et al., 2020](#)).

In the context of Tehran, [Zanjani, Sadeghi, and Shojaeizadeh \(2017\)](#) perform the analysis of covariance and multivariate regression to investigate the influence of educational intervention on the life satisfaction of middle-aged women. Their results show that education intervention and life satisfaction are positively significant. With the increase in the level of education, the average happiness score would also increase. This finding is further supported by [Mowisch, Brose, and Schmiedek \(2020\)](#) who demonstrate that people with a higher level of education would feel less worried, sad, lonely and depressed in their daily lives as compared to those with a low level of education. [Dahiya and Rangnekar \(2020\)](#) and [Pollmann-Schult \(2021\)](#) demonstrate that employees

who have an academic background could predict labour market outcomes. Thus, the sufficient high level of income could make individuals no longer worry about their financial situations, resulting in their life satisfaction.

Daraei and Mohahery (2012), Amaike (2014), Boo et al. (2016), Zanjani et al. (2017), Ngoo et al. (2020), Mowisch et al. (2020), Dahiya and Rangnekar (2020) and Pollmann-Schult (2021) demonstrate that educational attainment has a positive relationship with life satisfaction. Based on these existing findings, they suggest that education could help someone access a job opportunity to obtain a better financial performance in satisfying their lives. This leads to the following H₇.

H₇: Higher educational attainment positively influences life satisfaction.

In the context of Africa, Hyman and Williams (2001) conduct bivariate analyses and their results show that resilience could mediate the relationship between education and life satisfaction. Their finding indicates that resilient students believe that they are capable of overcoming challenges. They tend to face their disappointment when they fail, so they have to cope with loss and adapt to change. This would subsequently increase their life satisfaction in the future. On top of that, Kjeldstadli, Tyssen, Finset and Hem (2006) and Ainize, Estibaliz and Oihane (2018) state that resilience skills provide knowledge to

those individuals who have depression and anxiety disorders that they have experienced in their studies. This consequently increases their job opportunities and advancement towards a better life satisfaction.

Furthermore, [Kilinc, Yildiz and Kavak \(2019\)](#) find that those people with high psychological resilience could deal with the stress to shape their life satisfaction by pursuing their higher education aspirations. As a result, those who have higher educational attainment can enjoy higher job opportunity and promotion, hence coming to greater level of life satisfaction in the future. [Hyman and Williams \(2001\)](#), [Kjeldstadli et al. \(2006\)](#) and [Ainize et al. \(2018\)](#) claim that individuals' educational attainment could be mediated by their resilience towards their life satisfaction. This consequently increases their job opportunities and advancements towards a better life. In other words, those people with high psychological resilience could deal with the stress to shape their life satisfaction by pursuing their higher education aspirations. This fact prompts the following [H₈](#).

H₈: Educational attainment is mediated by resilience towards life satisfaction.

2.1.5 ² The Influence of Employment Policy on Life Satisfaction

In the context of Lagos, [Amah \(2009\)](#) uses hierarchical multiple regression analyses ² to examine the relationship between human resource policies and life satisfaction. Their findings show that ²⁷ human resources policies would help employees balance their work and non-work involvements (such as family involvements), thus enhancing their overall life satisfaction ([Hoorn, 2009](#)).

In the case of Britain, [Whiteley, Clarke, Sanders, and Stewart \(2010\)](#) employ the individual-level and multi-level ordered logit models to analyse the role of domestic government in affecting life satisfaction. They find that political efficacy is the positive relationship that warrants the satisfaction of life. Their finding implies that the rise in personal economic evaluations could enhance the level of life satisfaction. Furthermore, [Carr and Chung \(2014\)](#) in their application of multilevel structural equation modelling, find that to increase individuals' employment policies, their income needs to be protected and the negative outcomes associated with feelings of employment insecurity need to be mitigated.

In the case of European countries, [Kasmaoui and Bourhaba \(2017\)](#) employ the system generalized method of moments. Their results show that public policy is significantly related to life satisfaction. Despite social and cultural factors, public policy can offer generous unemployment benefits,

progressive taxation and income equality that are altogether the predictors of the general well-being of individuals. For example, increasing employment rate would lead to individuals being able to afford their daily requirements, thereby enhancing their overall life satisfaction. Public policy can contribute to the building of infrastructure, establishment of a good education system and promotion of health care services which can increase the welfare of citizens' lives. [Ngoo et al. \(2020\)](#) state that government policies are concerned with the citizens' life satisfaction, as mass dissatisfaction is often the cause of political instability and regime change. Meanwhile, government make policy efforts to improve citizens' welfare and life satisfaction.

With the application of the system generalized method of moments in the context of Japan, [Knoll and Pitlik \(2014\)](#) find that public policy and satisfaction of life are not associated with each other. This finding is due to fact that the burden of high tax is harmful to all income groups not only for the top income group. In Asia, [Ngoo et al. \(2014\)](#) note that public policy does not associate with high life satisfaction. Their finding shows that public policy instability also would not contribute to the level of life satisfaction. In Malaysia, [Yiap and Geetha \(2017\)](#) perform the multiple regression analysis to demonstrate that government policy contributes to the least on individuals' well-being. Their finding indicates that although government policy may not directly affect one's well-being, these policies may still be detrimental in the results. For example, the government could promote job opportunities because many studies show that unemployment causes dissatisfaction in people's lives. The findings by [Lee and Lee \(2019\)](#) further show that public policy will not simply be changed

because of any individuals' policy action, therefore public policy and life satisfaction are deemed insignificant.

The majority of studies, like [Whiteley et al. \(2010\)](#) and [Kasmaoui and Bourhaba \(2017\)](#) demonstrate that public policy is positively related to life satisfaction. The public policy plays an integral role which is to strengthen social solidarity; this can contribute to the high level of life satisfaction by building infrastructure, establishing a good education system, improving employment chances and promoting health care services. This fact leads to the following [H₉](#).

H₉: The implementation of employment policy positively influences life satisfaction.

In the context of England, [Mguni et al. \(2011\)](#) hypothesize that resilience could act as a mediator in the public policy and satisfaction of life. Their finding shows that resilient individuals tend to adapt to the public policies. Also, individuals could make daily sound decisions to enhance the satisfaction in their life. Policymakers may consume lesser time to implement new policies when residents have resiliency skills, further generating welfare in life. In the case of Liverpool, [Bennett \(2015\)](#) employs mixed methods and the results also show that resilience is mediated the relationship between public policy and life satisfaction. The author finds that those resilient individuals who have different perceptions could easily understand the implementation of government policies.

Mguni et al., (2011) and Bennett, (2015) imply that public policy is mediated by resilience towards life satisfaction. Resilient people can easily and quickly comprehend the policy or facilities imposed by government to stimulate and further resolve the economic problem. Eventually, they would improve their life satisfaction. This fact prompts the following **H₁₀**.

H₁₀: Employment policy is mediated by resilience towards life satisfaction.

2.2 Conceptual Framework

Based on the existing literature, this study develops a conceptual framework. Conceptual framework is generally developed based on the literature review of past studies and theories about the study, which forms a visual representation of the relationships between dependent and independent variables (Swaen, 2015). This study incorporates resilience as an indispensable part of life satisfaction that plays the role of mediator. Working adults with high resilience are normally able to cope with the adversities and develop resources for them to live well. Therefore, this study adapts the bottom-up theory in developing the framework with some modification to achieve the objectives of the study. To improve the existing framework, this study attempts to consider resilience in mediating the relationship between financial literacy, financial situation, physical health status, educational attainment and employment policy toward life satisfaction. The conceptual framework as shown as Figure 2.2.



Figure 2.2: Conceptual framework of the determinants of life satisfaction.
Source: Developed for study

As shown in [Figure 2.2](#), hypotheses are developed according to two aspects. The first aspect is to detect the direct effects of financial literacy, public policy, financial situation, educational attainment and physical health status on life satisfaction. These hypotheses are [H1](#), [H3](#), [H5](#), [H7](#) and [H9](#). Then, it is followed by the second aspect that detects the indirect effects of these determinants on life satisfaction through resilience. The hypotheses include [H2](#), [H4](#), [H6](#), [H8](#) and [H10](#).

2.3 Definitions of Constructs

The definitions for all constructs in the framework are given in [Table 2.2](#).

Table 2.2: Definitions of constructs

Life satisfaction	An individual's evaluation of his or her life as a whole. Life satisfaction is more subjective which can be affected by how he or she feels on a particular day. Life satisfaction is also used to show their feelings (moods), emotions, and how they feel about their directions and options for the future (Sumner, 1966).
Financial literacy	Financial literacy is the financial knowledge and understanding how the money is spent, made, and saved. An individual has financial literacy which is the skills and ability to use the financial resource to make financial decision correctly, such as how to generate, invest, save and spend money (Huston, 2010).
Employment policy	Employment policies are descriptions of how all employees, regardless of job description or title, are expected to conduct themselves. This policy is typically developed by a company's human resources (HR) department and distributed to all employees in the form of a handbook. Employees can use this handbook as a reference, as well as guidelines on management, employment, vacation and sick time, compensation, benefits, working time, contract or understanding between the company or any affiliate and any employee (Law Insider, 2013).

Education attainment	Educational attainment refers to the degree or level of completed academic of a person. Successful completion of a level of education refers to the achievement of the learning objectives of that level, typically validated through the assessment of acquired knowledge, skills and competencies (Statistics Canada, 2016).
Physical Health status	Health status refers to the health (good or poor) of a person. It encompasses issues linked to living with diabetes such as blood, glucose, blood pressure levels, body weight, thus it affects people quality of life (Farlex, 2012).
Financial situation	Financial situation is about how satisfied we are with our own financial needs such as the amount of savings you have, how much you are setting away for retirement and how much of your income you are spending on fixed or non-discretionary expenses (Goldman, 2014).
Resilience	Resilience is about individual's ability to view a stressful or adverse experience in a positive light (Kobasa, 1979), tolerate negative affect (Lyons, 1991), strive toward personal goals (Rutter, 1985), and generate optimism (Connor & Davadson, 2003).

Source: Developed for the study.

2.4 Literature Gap

This study intends to fulfil the literature gap by applying the bottom-up theory to explore the mediating effect of resilience on the determinants toward life satisfaction among working adults in the metropolitan area. In the context of Malaysia, the WPKL is a place that provides individuals with stress and high cost of living. Thus, the study is expected to provide findings that contribute to the new knowledge on improving the bottom-up theory by adding resilience as a mediator. Also, the findings could demonstrate the importance of developing the resilience skill in order to cope with the challenges in the stressful workplace. Although some researchers place an emphasis on the influence of financial literacy in examining life satisfaction in the context of European countries, most

of them are found to have overlooked the importance of financial literacy for individuals in the metropolitan area.

As shown in [Table 2.4](#), most existing studies on life satisfaction are conducted in the Western countries. However, there is the literature that focuses on individuals residing in the metropolitan areas in Asia has been limited. The growing interest surrounding the targeted area is not surprising, given the increase of mental illness cases, such as stress and depression, and added to this, the high cost of living.

Table 2.4: Articles included in the sample according to different continents

References	
Swami et al. (2007); Daraei & Mohahery (2012) ; Howell et al. (2012) ; Knoll & Pitlik (2014) ; Ali et al. (2015) ; Shi et al. (2015) ; Liang et al. (2016) ; Boo et al. (2016) ; Hassibuan & Lubis (2017) ; Yiap & Geetha (2017) ; Guo (2017) ; Yang et al. (2018) ; Pan et al. (2019) ; Dahiya & Rangnekar (2020) ; Khuong et al. (2020) ; Huang et al. (2020) ; Shamsul et al. (2021) ; Khalid (2021) ; Han & Kim (2021) ; Muhammad & Joy (2022)	Asia
Rossi & Bisconti (2007) ; Amah (2009) ; Horn (2009) ; Cohn et al. (2009) ; Shim et al. (2009) ; Kapteyn et al. (2009) ; Whiteley et al. (2010) ; Mguni et al. (2011) ; Taft et al. (2013) ; Carr & Chung (2014) ; Richards (2014) ; Amaike (2014) ; George et al. (2014) ; Clement & Sauer (2015) ; Daniel & Brown (2016) ; Muir et al. (2016) ; Hoskins & May (2016) ; Kasmaoui & Bourhaba (2017) ; Faircloth (2017) ; Capano & Woo (2017) ; Barand & Imanian (2017) ; Hoensey et al. (2018) ; Ainize et al. (2018) ; Goel et al. (2018) ; Yildirim (2019) ; Lee & Lee (2019) ; Salignac et al. (2019) ; Jovanovic & Joshanloo (2019) ; Jayasinghe, et al. (2020) ; Wang et al. (2020) ; Pollmann-Schult (2021) ; Mowisch et al. (2021) ; Tavares (2022)	Western Countries: European, North America and South American

Sources: Candidate's compilation.

As shown in [Table 2.5](#), most existing studies often do not specifically narrow the range of adults' age group in examining their life satisfaction. According to [National Health and Morbidity Survey \(2019\)](#), adults who are aged between 20 and 39 years old are often quickly and easily depressed in their

daily life as compared to other age groups. Therefore, this study narrows the range of age of the respondents, that is between 20 and 39 years old.

Table 2.5: Articles included in the sample according to different age groups

References	
Jayasinghe et al. (2020)	15 and above
Han & Kim (2021)	15-64
Pollmann-Schult (2021)	16 and 17
Kasiker & Peker (2022)	18-21
Amize et al. (2018)	18-45
Khalid (2021)	18-47
Yildirim (2019)	18-62
Ng et al. (2020)	21 and above
Sang & Joshanloo (2019)	25 and above
Ngoo et al. (2020)	30-69
Muhammad & Joy (2022)	45 and above
Kilinc et al. (2019)	46-99
Shamsul et al. (2021)	60-74
Jovanovic & Joshanloo (2019)	63 and above
Tavares (2022)	70 and above

Sources: Candidate's compilation.

CHAPTER 3: RESEARCH METHODOLOGY

3.0 Overview

This chapter provides the discussion on the use of the data and methodology in the study. This chapter consists of several sub-sections that touch on research design, sampling, data collection, research instrument, pre-test and pilot study, and data analysis methods.

3.1 Research Design

This study adopts quantitative design method with cross-sectional data as the methodology of this study. Quantitative research is more scientific (Johnson & Christensen, 2008), objective (Formplus, 2021), and reliable in terms of the prediction of effect and cause (Apuke, 2017; Bhandari, 2020). On top of that, this study utilizes SMARTPLS 3.0 based on PLS-SEM analysis to perform the analysis in investigating the direct and mediating effect on the determinants toward life satisfaction. A 6-point Likert scale is used to measure responses for each item in the designed questionnaire. All items are provided for the

constructs, including life satisfaction, financial literacy, employment policy, financial situation, physical health status, and educational attainment and resilience.

3.2 Population and Sample

3.2.1 Targeted Respondents

The targeted respondents are those who are selected to be a representative group from the population in the study. The working adults in the WPKL aged 20 to 39 years old are our study's targeted respondents. The reason for choosing the age group of 20-39 years old is that adults of this age group tend to quickly and easily get depressed as compared to other age groups ([National Health and Morbidity Survey, 2019](#)).

Next, those people starting from 20 years old are more likely to involve in adopting a risk-taking behaviour because they think themselves as invulnerable ([Kipke, 1999](#)). Therefore, young employees have the high chance to become stressed and to experience bankruptcy compared to other age groups. On top of that, most Malaysians under 40 years old are declared bankrupt due

to the high cost of borrowings, credit card debt and loans, and personal loans (Federation of Malaysian Consumers Association Report, 2011; Asian Institute of Finance, 2015).

Besides, the sampling location of this study is at KLCC. In 2018, this targeted area was resided by approximately 1.8 million people (Department of Statistics Malaysia, 2018). Also, it is the capital, principal economic and political centre of Malaysia (Department of Statistics Malaysia, 2018). In 2015, the depression rate of 39.8% was found to be the highest in WPKL (National Health and Morbidity Survey, 2015). In 2019, the depression rate was not recorded to be the highest, but the growth rate of consumer price index in 2019 was recorded to be the highest at 1.2% covering 5.7% increase in prices of food and non-alcoholic beverages. As shown in Table 1.1, 1.2, 1.3, and 1.5, this targeted area is also recorded to have the highest cost of living index of 93 (Expatisan, 2022) and the highest (2.66%) of bankruptcy cases (Malaysian Department of Insolvency, 2019). Therefore, the WPKL is the most preferred town to be chosen as the study location.

Table 3.1: Depression rate by age group

	Percentage (%)
20-24	$\frac{89345}{472420} = 18.91\%$
25-29	$\frac{118087}{472420} = 25\%$
30-34	$\frac{47340}{472420} = 10\%$
35-39	$\frac{42592}{472420} = 9.02\%$

Source: National Health and Morbidity Survey (2019)

3.2.2 Sampling Size

The sample size is the number of people extracted from a population to be involved in a survey or experiment. This study uses three methods to identify the minimum required sample size of the study, such as Krejcie and Morgan, sample size calculator for CheckMarket, and GPower version 3.1 software. The first determination of sample size method is Krejcie and Morgan (Krejcie & Morgan, 1970). Krejcie and Morgan developed a table for determining the sample size for a given population. As shown in Table 3.2, the total population of working adults who are 20 to 39 years old in WPKL is 49,4600. Based on Krejcie and Morgan's table, when the population is 75,000 and above, the sample size is fixed at 384. As a result, the study's minimum required sample size would be 384, as shown in Figure 3.2.

Table 3.2: Employed persons by age group in Wilayah Persekutuan Kuala Lumpur, 2018

	Populations ('000)
20-24	70.3
25-29	142.1
30-34	149.2
35-39	133
Total population	494.6

Source: Department of Statistic, Malaysia (2018)

The second determination is the sample size calculator for Checkmarket (2019). This sample size calculator is used to determine the number of respondents needed in a survey. As shown in Table 3.3, the calculator registers the population size (how many populations are targeted in the state/city/country),

²⁹ the margin of error of 5% and confidence level of 95%. In short, Table 3.4 shows that the minimum required sample size should be 384 observations.

⁹
Table 3.3: Calculate sample size of margin of error

Population Size	494600
Number of respondents	384
Confidence level	95%
Margin of Error	5%

Source: Checkmarket (2019)

⁹
Table 3.4: Minimum required sample size calculator

Population Size	494600
Margin of error	5%
Confidence level	95%
Required sample size	384

Source: Checkmarket (2019)

Lastly, this study also suggests that GPower identifies the minimum required sample size of the study. The setting of GPower is followed by Dattalo (2008) with a beta of 0.80 and alpha of 0.05. The F-test set with linear multiple regression, includes the fixed model, R^2 deviation from zero, and seven predictors in the model. As shown in Figure 3.1, the minimum required sample size of GPower is 151. As a result, this study would target at obtaining a minimum required sample size of 384, which is supported by Krejcie and Morgan (1970) and Checkmarket (2019).

Input Parameters		Output Parameters	
Determine =>	Effect size f^2	0.10	Noncentrality parameter λ
	α err prob	0.05	Critical F
	Power ($1 - \beta$ err prob)	0.80	Numerator df
	Number of predictors	7	Denominator df
			Total sample size
			Actual power

Figure 3.1: GPower version 3.1 software

3.2.3 Sampling Technique

A sampling technique can be based on either probability or non-probability approach. Probability sampling is used when everyone has an equal chance to be randomly selected from the entire population's contact information list. In contrast, ⁵ non-probability sampling is a sampling technique in which the researcher chooses samples based on the subjective judgment of the researcher rather than doing the random selection. Here, the non-probability sampling method is adopted due to the fact that all working adults in WPKL cannot be obtained completely from Dewan Bandaraya Kuala Lumpur.

Among the types of non-probability technique, a convenience sampling technique is selected to be used in this study. According to Bhaskaran (2020), convenience sampling is defined as a data collection method from a conveniently available pool of respondents. There are no specific criteria required to be part of this targeted respondents' sample. This sampling technique does not need to consider whether or not the respondents represent the entire population. Using this convenience sampling technique can help us observe viewpoints, opinions, and habits in the easiest possible manner. For

example, this study gives no restriction on the income level, marital status, and education level of working adults. This study only focuses on which determinants most affect the working adults in the WPKL.

3.3 Research Instrument

The self-administered questionnaire is developed for this study. The questionnaire consists of two sections: Section A and Section B. Section A touches on the respondents' demographics, including age group, education level, gender, monthly income, marital status, race, monthly expenses and monthly saving. This is followed by Section B that provides the list of statements for each construct, such as financial literacy, employment policy, financial situation, physical health status, educational attainment, resilience and life satisfaction.

In lieu of the 5-point Likert scale, this study uses the 6-point Likert scale with end-anchors labelled “*strongly agree*”, “*agree*”, “*slightly agree*”, “*slightly disagree*”, “*disagree*” and “*strongly disagree*” whereby constructing the items of each variable is supported by [Ryff and Keyes \(1995\)](#); [Chomeya \(2010\)](#); and [Abilitylab \(2013\)](#). The reason as to why this current study chooses 6-point Likert scale is that the scale can reflect upon the actual responses of the respondents ([Nor-Azzatunnisak, Roseliza-Murni, Manap, & Hoesni, 2017](#)). For example, if any point of “*neutral*” is desired, the “*slightly agree*” and “*slightly disagree*” choices can be averaged together.

According to [Thompson \(2018\)](#), the 5-point Likert scale presents some problems such as it gives a chance for respondents to often pick the neutral option when they do not want to think too hard on the statement in the questionnaire. As a result, the collected data cannot reflect upon their actual responses. For the psychology test, the 6-point Likert scale tends to give the discrimination and reliability values which are higher than the 5-point Likert scale ([Chomeya, 2010](#)). After the development of the questionnaire, the pilot study is carried out to investigate the reliability and validity of the questionnaire. The items for each construct are as listed in [Table 3.5](#).

Table 3.5: The list of items for each construct

Financial literacy		
FL1	Johnson & Parrotta (2011)	I use credit card(s) to pay my loan(s).
FL2	Johnson & Parrotta (2011)	I apply the loan(s) to reduce my commitment(s).
FL3	Johnson & Parrotta (2011)	I allow my friend(s) to use my name to make purchase(s) of vehicle.
FL4	Johnson & Parrotta (2011)	I allow my friend(s) to use my name to make purchase(s) of property.
FL5	Campara et al. (2017)	I buy insurance to reduce my future uncertainty.
Employment policy		
PP1	Whiteley et al. (2010)	The implementation of Malaysia Employment Act would enhance my social network in career.
PP2	Whiteley et al. (2010)	The implementation of Malaysia Employment Act would enhance my welfare in working.
PP3	Subramaniam (2010)	The implementation of Malaysia Employment Act protects my job security.
PP4	Subramaniam (2010)	The implementation of Malaysia Employment Act would provide me flexible working hours.
PP5	Subramaniam (2010)	The implementation of Malaysia Employment Act would provide better working environment.
PP6	Subramaniam (2010)	The implementation of Malaysia Employment Act would enhance my productivity in career.
Financial situation		
FS1	Parrotta (1999)	I feel comfortable with my current salary.
FS2	Parrotta (1999)	I am able to encounter my financial problem(s).
FS3	Campara et al. (2017)	I have my retirement plan(s).
FS4	Campara et al. (2017)	I have regular saving(s).
FS5	Campara et al. (2017)	I am able to allocate my expenditure for my family matter(s).
FS6	Campara et al. (2017)	I am able to allocate my expenses for emergency purpose(s).

Physical health status		
HS1	Traina et al. (2015)	I have normal body weight.
HS2	Traina et al. (2015)	I have normal blood sugar level.
HS3	Traina et al. (2015)	I have normal blood pressure.
HS4	Traina et al. (2015)	I involve physical activities after working hours.
HS5	Traina et al. (2015)	I involve physical activities during the weekend.
Educational attainment		
EA1	Lam, et al. (2016)	The knowledge I learn from school can be apply in real life situation.
EA2	Lam, et al. (2016)	The person who has high education level would help to increase in the social networks.
EA3	Lam, et al. (2016)	The person who has high education level tends to meet his/her expected salary.
EA4	Lam, et al. (2016)	The person who has high education level would have a chance in getting a job.
EA5	Lam, et al. (2016)	The person who has high education level would have a chance in getting a job promotion.
Resilience		
RL1	Anne (2017)	I have confidence to carry out assigned task(s) by superior.
RL2	Anne (2017)	I always ready to overcome daily challenge(s).
RL3	Anne (2017)	I always show my optimism to others.
RL4	Anne (2017)	I consider the challenge(s) as opportunities to improve my problem-solving skills.
RL5	Nicholson (2018)	I am able to handle my stress in working.
Life satisfaction		
LS1	Folkman (1997)	I take longer time than usual to perform a task.
LS2	Hafekost et al. (2017)	I have high expectation in handling my daily task(s).
LS3	Neugarten et al. (1961)	I always have conflicts with my family member(s).
LS4	Neugarten et al. (1961)	I have a good relationship with my superior(s).
LS5	Neugarten et al. (1961)	I have a good relationship with my colleague(s).
LS6	Folkman (1997)	I feel uncomfortable when I am alone.
LS7	Folkman (1997)	I lost interest in my daily life.
LS8	Folkman (1997)	I have negative emotion in my daily life.
LS9	Neugarten et al. (1961)	I have sleepless night(s) when I encounter daily life challenge(s).

Source: Developed for study

3.4 Data Collection

Data collection is an important step to improve the accuracy or validity of the study findings or outcomes for the quantitative research process ([Sadan, 2017](#)). It is a procedure of collecting primary data, measuring and collecting data, and evaluate the outcome results ([Kabir, 2016](#); [Stellenbosch University Library, 2017](#)). The data collection was conducted in the Kuala Lumpur City Centre

(KLCC) with a focus on a group of working adults. This is because KLCC is a gold standard business hub, part of the International Association Central City and also it offers convenient transportation. The questionnaire distribution time was from 8.30 am to 7.30 pm on weekdays, which was hoped to increase the working adults' response rate.

Before conducting the person-administered questionnaire, the ethical clearance form needs to be applied for the field trip to obtain the approval letter from the Faculty General Office in the university. Before the respondents respond to each statement in the questionnaire, a short briefing about the purpose and objective of the study would be given to them in ensuring that they understand the purpose of conducting the survey.

3.5 Pre-test and Pilot Study

Before analysing the small-scale study, the questionnaire needs to be checked by academic experts, and this is called a pre-test. Through the pre-test, irrelevant items or too many items inside the constructs can be identified and removed (Hoskin, 2019). Assistant Professor Dr. Teoh Sok Yee and assistant Professor Dr. Leong Lai Ying from Universiti Tunku Abdul Rahman were willing to examine the content validity of the questionnaire. Their recommendations and

suggestions are highly appreciated in improving the designed questionnaire to avoid confusion or misunderstanding among survey participants.

The first given recommendation is to remove some of the items, since too many items can lead to AVE having the value lesser than 0.7 and thus, the factor loadings would be lesser than 0.4. As a result, it would become biased. Their second recommendation is to remove and restructure some inadequate items. Meanwhile, academic experts in research methodology suggests recalculating the monthly salary, expenses, and savings because of inconsistent interval. Besides, she also proposes amending the occupation since it was confusing for the respondents to choose their career.

Next, the questionnaire is sent to two experts in qualitative research to ensure the clarity of the use of English language, vocabulary and sentence structures in presenting appropriate items. Hence, the respondents would easily understand and provide their high response during the actual survey.

After conducting pre-test, the pilot study is carried out on 30 respondents to investigate the questionnaire's instruments' reliability and validity before testing the full-scale research. Based on [Roscoe \(1975\)](#) on the rule of thumb for determining the pilot study's sample size, it declared that the minimum sample size should be 30 observations and appropriate for most of the studies. The 30-rule-of-thumb of the pilot study suggests for every situation ([Browne, 1995](#); [Martinez & Abrain, 2007](#); [Machin, Campbell, Tan & Tan, 2018](#)). Since the use

of 30 is commonplace to reduce the imprecision around the estimate of the standard deviation, the pilot study data is collected by distributing a questionnaire on 30 working adults in KLCC aged 20 to 39 years old.

Based on [Table 3.6](#), the pilot study results show that the eight items of FL1, FL2, PP5, FS3, RL4, LS1, LS7 and LS8 are removed because of the fact that the loading values are lower than the rule of thumb 0.4 ([Hair et. al, 2010](#)). Furthermore, 42 item loadings have fulfilled the requirements in which the loading values are above the required minimum of 0.4. From the reliability test, all of the constructs meet the high reliability of 0.8 and above ([Hair et. al, 2010](#)). Also, AVE's results show that the constructs meet the required minimum of 0.4 ([Fornell & Larcker, 1981](#); [Lam, 2012](#); [Muhamad & Nor-Azreen, 2016](#)). To conclude, there is reliability and validity among all of the constructs. This indicates that all items in the questionnaire are considered to be reliable in representing the constructs.

Table 3.6: Summary results of the pilot study

Construct	Items	Factor loading	CR	AVE
Financial Literacy	FL3	0.698	0.806	0.470
	FL4	0.406		
	FL5	0.692		
	FL6	0.782		
	FL7	0.683		
Employment Policy	PP1	0.926	0.900	0.605
	PP2	0.613		
	PP3	0.833		
	PP4	0.665		
	PP6	0.661		
Financial Situation	FS1	0.710	0.919	0.657
	FS2	0.752		
	FS4	0.701		
	FS5	0.830		
	FS6	0.889		
Educational Attainment	ED1	0.580	0.887	0.615
	ED2	0.801		
	ED3	0.849		
	ED4	0.823		
	ED5	0.837		
Physical Health Status	HS1	0.767	0.856	0.547
	HS2	0.810		
	HS3	0.813		
	HS4	0.636		
	HS5	0.654		
Resilience	RL1	0.866	0.935	0.742
	RL2	0.919		
	RL3	0.917		
	RL5	0.773		
	RL6	0.823		
Life Satisfaction	LS2	0.765	0.892	0.488
	LS3	0.894		
	LS4	0.715		
	LS5	0.519		
	LS6	0.672		
	LS9	0.500		
	LS10	0.751		
	LS11	0.758		
	LS12	0.663		

Notes: CR denotes composite reliability; AVE denotes average variance extracted; * denotes removed.

Source: PLS-SEM software

3.6 Method of Data Analysis

After the data collection, PLS-SEM is performed by using SMARTPLS version 3.0 to investigate the data analysis rather than use AMOS to conduct this study. The reason is that PLS-SEM relies on a large number of items or constructs even with a small sample size (Garson, 2016), the range of sample size is at least 200-400 respondents for PLS-SEM (Kenny, 2012; Knock & Hadaya, 2018). The conceptual model for the proposed framework is constructed using the Smart PLS software (Gefen, Straub, & Boudreau, 2000). On top of that, this study places an emphasis on formative measurement models, therefore PLS-SEM is more suitable to conduct in this study (Petter, Straub, & Rai, 2007; Henseler, 2018; Benitez, Henseler, Castillo, & Schuberth, 2020). However, AMOS can be used when the model involves the reflective measurement and SMARTPLS version 3.0 can also be used to examine all the directions of relationship simultaneously which is the same as AMOS (Petter et al., 2007). In this study, PLS-SEM is used. In order to perform the descriptive analysis, the SPSS would be used to obtain respondents' demographic profile in terms of the percentage frequencies.

Next, the measurement model is evaluated in terms of convergent reliability and validity (factor loadings, composite reliability, average variance extracted, Fornell-Lacker, cross loading and Heterotrait-Monotrait ratio). Then, it is followed by inferential analysis (structural model) that tests the developed

research hypotheses in examining the ² direct and indirect effects of determinants on life satisfaction.

3.6.1 Descriptive Analysis

Descriptive analysis is an essential first step before conducting the statistical analyses which summarize data in a simple way (Lund Research Ltd, 2018). It can also have a role in data distribution and identify the outliers and double-check data entry errors. The present study analyses the respondents' demographic profile based on age, education level, gender, monthly income, marital status, race, monthly expenses, and monthly savings.

3.6.2 Reliability and Validity Analyses

Followed by the reliability analysis, it is a measurement technique that allows researchers to ensure that the measures are stable and consistent over time. There is also the consistency across items on the scale and the term used is *reliable*. Otherwise, the items are not a reliable measure of the construct. Next, the SMARTPLS version 3.0 would be carried out to test the internal reliability and consistency among constructs. The value is ranged between 0 and 1, where

the approximated value to one indicates a higher reliability level. The minimum requirements of the value of composite reliability values are between 0.6 and 0.95 in order to achieve the satisfactory level of the internal consistency reliability (Fornell & Larcker, 1981; Nunnally & Bernstein, 1994; Hair, Hult, Ringle, & Sarstedt, 2014; Hamid, 2017).

Besides that, Average Variance Extracted (AVE) would be used to analyse the validity of the constructs. The AVE value should exceed 0.5 so that it is adequate for convergent validity. However, some of the researchers claim that if the AVE value is 0.4 but the composite reliability is higher than 0.6, the convergent validity of the construct is still considered as adequate (Fornell & Larcker, 1981; Lam, 2012; Muhamad & Nor-Azreen, 2016). Otherwise, the items should be removed. The criteria of the reliability test are summarized in Table 3.7.

Table 3.7: Criterion of the reliability analysis

	Criterion
Factor Loadings	The value of the loading is from 0.4 to 0.7 above. Otherwise, items should be removed (Hulland, 1999; Henseler, Ringle & Sinkovics, 2009; Nascimento & Macedo, 2016).
Composite Reliability	The values of composite reliability between 0.6 and 0.95. Otherwise, it indicates a lack of reliability and should be removed (Fornell & Larcker, 1981; Nunnally & Bernstein, 1994; Hair, Hult, Ringle, & Sarstedt, 2014; Hamid, 2017).
Convergent Validity- Average Variance Extracted (AVE)	AVE value should exceed 0.4 and above. Otherwise, the items should be removed (Fornell & Larcker, 1981; Lam, 2012; Huang, Wang, Wu, & Wang, 2013; Muhamad & Nor-Azreen, 2016).

Source: Hair, Hult, Ringle, & Sarstedt (2014)

After confirming the reliability among all the constructs, discriminant validity is performed. Discriminant validity⁴ measures the degree of differences between the overlapping construct. To achieve the discriminant validity, there are three tests to be carried out such as²⁸ cross loading, Fornell-Larcker and Heterotrait-monotrait (HTMT) ratio. For the first criteria, the factor loading analysis is performed to meet the requirement of the minimum value of 0.7 (Henseler, Rongle & Sinkovics, 2009; Gotz, Lehr-Gobbers & Krafft, 2010; Olalera, 2013). While some of the authors state that the minimum loading value of 0.4 is acceptable, otherwise, the items should be removed. (Hair, William, Barry, & Anderson, 2010).

For the second criterion of the discriminant validity, the analysis of Fornell-Larcker requires the value of¹⁷ square root of AVE for each construct to be greater than the correlations with other latent constructs. Lastly, the HTMT⁴ ratio is emphasized to achieve higher specificity, sensitivity rates (97% - 99%) and perform better in the discriminant validity as compared to cross loading (0%) and Fornell-Larcker (20.82%) (Kline, 2011). The value of HTMT⁴ close to 1 indicates a lack of discriminant validity. Some authors suggest that the value lower than 0.85 and 0.9 is considered to meet the discriminant validity among all constructs (Kline, 2011; Gold & Arvind, 2001). The criterion of discriminant validity is summarized in the following Table 3.8.

Table 3.8: Criterion of discriminant validity

	Criterion
Cross loading	The values of cross loading for all items under constructs are greater than all other non-target constructs which means there is discriminant validity between all of the constructs.
Fornell-Lacker	The square root of each construct's AVE should have a greater value than the correlations with other latent constructs in order to achieve discriminant validity between all the constructs.
HTMT ratio	The value of HTMT should be lower than 0.85 or 0.9 in order to meet discriminant validity between all variables. However, the result of HTMT values close to 1 indicates a lack of discriminant validity.

Source: Developed for study

3.6.3 Measurement Model

While ⁴² confirming the reliability and validity among all the constructs, the bootstrapping test would be carried out to perform the analysis through the application of SMARTPLS version 3.0. This measurement model consists of seven constructs, namely financial literacy, financial situation, employment policy, physical health status, educational attainment, resilience and life satisfaction. Next, a mediation analysis is used to investigate the mediation effect of resilience on the determinants toward working adults' life satisfaction. The significant level of this study is 0.05 ($\alpha = 0.05$). Furthermore, there is a total of ten hypotheses that are supported ¹⁰ if the p-value of the variables is lower than 0.05. Otherwise, the hypotheses are not supported.

3.6.4 Structural Model

After checking the direct effect, the PLS-SEM analysis would also be carried out to test the mediation causal relationships between the dependent and independent variables. In analysing this mediation causal relationships, Variance Accounted For (VAF) is used by dividing the total coefficient effect with the coefficient of the indirect effect of the variables (Hair et al., 2017).

The value of VAF that is lower than 0.2 indicates that the variable does not mediate the relationship between the dependent variable and independent variables. If the VAF value is between 0.2 and 0.8, the variable is considered to partially mediate the relationship between the dependent variable and independent variables. In short, the greater VAF value than 0.8 indicates that the variable fully mediates the relationship between the dependent and independent variables. Next, in one case, the value of VAF can be greater than one when the total effect is smaller than the indirect effect (Shrout & Bolger, 2002). In another case, the VAF value can be negative or infinity. This indicates the inconsistent mediation or suppressor effect (Hayes, 2009; MacKinnon, Krull, & Lockwood, 2010). The level of VAF is summarized in Table 3.9.

Table 3.9: Variance accounted for

	Level of the Mediation
<0.2	No mediation effect on the relationship between the independent and dependent variables.
0.2-0.8	Partial mediation effect on the relationship between the independent and dependent variables.
>0.8	Fully mediation effect on the relationship between the independent and dependent variables.

Source: Developed for study

3.7 Conclusion

¹⁴ In this chapter, the use of research methodology in this study is explained. This study uses the collected data from a self-administrated questionnaire. After that, the pilot and full-scale study would be carried out to test the reliability and validity. Finally, the bootstrapping test is performed to detect the significant relationship among variables.

CHAPTER 4: RESULTS AND DISCUSSIONS

4.0 Overview

This chapter uses statistical procedures to investigate the collected data. Firstly, the demographic profile would be carried out, followed by the measurement model (convergent reliability and validity and discriminant validity), and structural model (direct and indirect effect). Lastly, the discussion part is used to interpret the results from the statistical test.

4.1 Response Rate

The current study aims to have a minimum sample size of 384 respondents in WPKL. There are 400 existing copies of questionnaires distributed in the targeted area. Among 400 copies, 16 copies of filled questionnaires were removed because some respondents ignored some statements, left some questions unanswered, also gave incorrect feedback in providing their responses. These issues would lead to low response rate and bias results. Therefore, it is

very important to give a short briefing to respondents about the purpose of the study to ensure that they have understood the objective of conducting the study. As a result, this study acquires 384 fully completed questionnaires with the response rate of 96%.

4.2 Respondents' Demographic Profiles

In the survey, the demographic profile for respondents is based on age, education level, gender, monthly income, marital status, race, monthly expenses, and monthly saving. As shown in [Table 4.1](#), a total of 230 (59.89%) female and 154 (40.11%) male working adults had participated in the survey. By looking into their age groups, 42.45% and 28.91% of working adults aged 20 to 24 and 25 to 29 years old are most involved in this survey as the age groups tend to have the highest depression rate at 3.1% and 3.9% ([National Health and morbidity survey, 2019](#)).

It is well established that most Chinese and Malays reside in the WPKL instead of Indian and other races. In order to represent the population, the survey involves 46.09% of Chinese working adults and 34.90% of Malay working adults as compared to Indian and other races. Fresh graduates' starting salary is ranged between RM2,399 and RM3,199 ([Malaysian Employers Federation,](#)

2019). In the survey, 58.07% of respondents are found to hold bachelor degree with their monthly income between RM2,001 and RM4,000.

Since WPKL is known for its high costs of living, 47.92% of respondents are able to have their monthly savings below RM500. As shown in Table 4.1, the high costs of living could also affect 33.85% of those respondents who have income between RM2,000 and RM4,000 to cover their high monthly expenses between RM1,201 and RM1,800.

Table 4.1: Respondents' demographic characteristics

		Number	Percentage (%)
Gender	Male	154	40.11
	Female	230	59.89
Marital Status	Single	302	78.65
	Married	78	20.31
	Divorced	4	1.04
Age Group	20-24 years old	163	42.45
	25-29 years old	111	28.91
	30-34 years old	67	17.45
	35-39 years old	43	11.19
Race	Malay	134	34.90
	Chinese	177	46.09
	Indian	73	19.01
	Others	0	0
Level of Education	Primary	1	0.26
	Secondary school	30	7.81
	Certificate/diploma	48	12.5
	Bachelor of degree	223	58.07
	Master degree	67	17.45
	Doctorate degree or other qualifications	15	3.91
Monthly Income	Less than RM2,000	112	29.17
	RM2,001-RM4,000	151	39.32
	RM4,001-RM6,000	64	16.67
	RM6,001-RM8,000	34	8.85
	More than RM8,001	23	5.99
Monthly Expenses	Less than RM600	40	10.42
	RM601-RM1,200	98	25.52
	RM1,201-RM1,800	130	33.85
	RM1,801-RM2,400	62	16.15
	RM2,401 and above	54	14.06
Monthly Saving	Less than RM500	184	47.92
	RM501-RM1,000	104	27.08
	RM1,001-RM1,500	44	11.46
	RM1,501-RM2,000	19	4.95
	RM2,001-RM2,500	18	4.69
	RM2,501 and above	15	3.90

Source: Developed for study

4.3 Scale of Measurement

16
Scale of measurement is a classification that indicates the nature of information within the values assigned to variables. There are four criteria needed to be carried out to evaluate the adequacy of the measurement model, namely outer loadings, construct reliability and validity, convergent validity and discriminant validity.

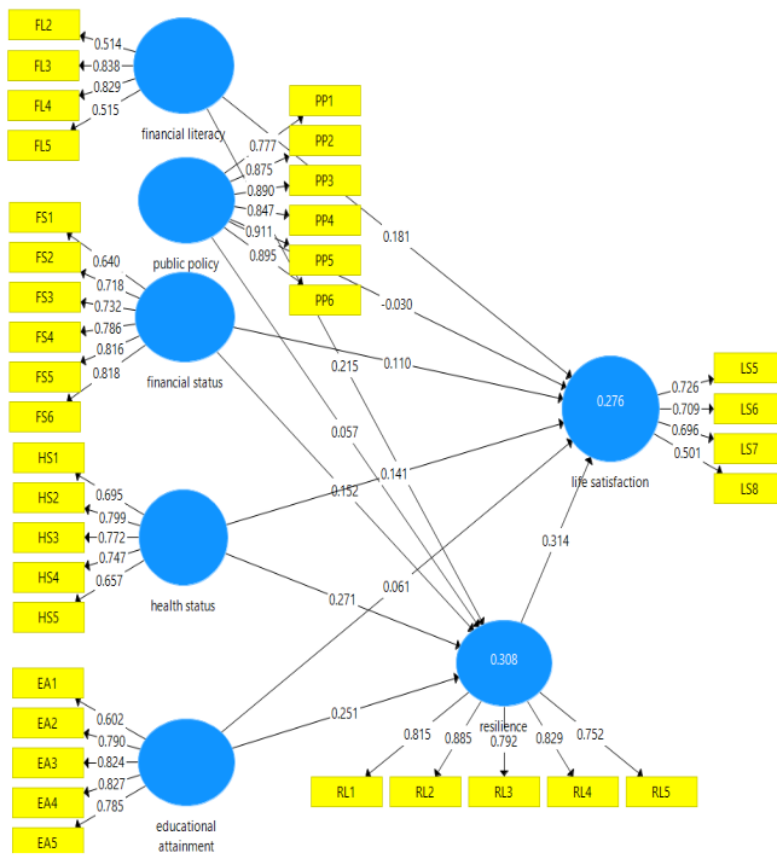


Figure 4.1: PLS-SEM measurement model with outer loadings and path coefficients
Source: Developed by PLS-SEM software

4.2.1 Outer Loading

To determine whether items are considered to be satisfactory, the minimum requirements of the factor loading values should be 0.4 (Hair, William, Barry, & Anderson, 2010), 0.7 and above (Henseler, Rongle & Sinkovics, 2009; Gotz, Lehr-Gobbers & Krafft, 2010; Olalera, 2013; Hair et al., 2014). Otherwise, the items ³⁵ should be removed.

As shown in Table 4.2, the outer loading value of educational attainment (EA) is above the acceptable value of 0.4. The results show that 0.602 for EA1, 0.790 for EA2, 0.824 for EA3, 0.827 for EA4 and 0.785 for EA5. Next, the results of financial literacy items of FL2, FL3, FL4, and FL5 are recorded as 0.514, 0.838, 0.829 and 0.515, respectively. Since the loading value for FL1 is found to be below than 0.4, FL1 is decided to be dropped from financial literacy.

For financial status (FS), the outer loading values for each item are found to be above 0.6. The outer loading values for FS1, FS2, FS3, FS4, FS5 and FS6 are 0.640, 0.718, 0.732, 0.786, 0.816 and 0.818, respectively. For physical health status (HS), its loading values for HS1, HS2, HS3, HS4 and HS5 are recorded to be 0.695, 0.799, 0.772, 0.747 and 0.657, respectively. The items from life satisfaction such as LS4, LS5, LS6 and LS7 are recorded to have loading values of 0.726, 0.709, 0.696 and 0.501, respectively. However, LS1 to

LS3 are not above the minimum required value of 0.4. Hence LS1 to LS3 are dropped from the list.

The outer loading for employment policy (PP) and resilience (RL) is found to be above the superior required value of 0.7. For example, the loading values for PP1, PP2, PP3, PP4, PP5 and PP6 are recorded to be 0.777, 0.875, 0.890, 0.847, 0.911 and 0.895, respectively. For resilience (RL) such as RL1, RL2, RL3, RL4 and RL5, they are found to have loading values of 0.815, 0.885, 0.792, 0.829 and 0.752, respectively.

Table 4.2: The results of outer loading

	EA	FL	FS	HS	LS	PP	RL
EA1	0.602						
EA2	0.790						
EA3	0.824						
EA4	0.827						
EA5	0.785						
FL2		0.514					
FL3		0.838					
FL4		0.829					
FL5		0.515					
FS1			0.640				
FS2			0.718				
FS3			0.732				
FS4			0.786				
FS5			0.816				
FS6			0.818				
HS1				0.695			
HS2				0.799			
HS3				0.772			
HS4				0.747			
HS5				0.657			
LS5					0.726		
LS6					0.709		
LS7					0.696		
LS8					0.501		
PP1						0.777	
PP2						0.875	
PP3						0.890	

PP4	0.847	
PP5	0.911	
PP6	0.895	
RL1		0.815
RL2		0.885
RL3		0.792
RL4		0.829
RL5		0.752

Notes: EA denotes educational attainment; FL denotes financial literacy; FS denotes financial situation; HS denotes physical health status; LS denotes life satisfaction; PP denotes employment policy; RL denotes resilience

Source: Developed by PLS-SEM software

4.2.2 Construct Reliability and Validity Test

The composite reliability is a better alternative to the ⁴⁹ Cronbach's Alpha because the ²³ scale reliability of Cronbach's Alpha may be overestimated (Garson, 2016). In order to confirm the convergent validity, each latent variable ⁴³ composite reliability and average variance extracted (AVE) are evaluated. The minimum values of the composite reliability and AVE are 0.7 (Henseler et al., 2012) and 0.4 (Fornell & Larcker, 1981; Lam, 2012; Huang, Wang, Wu, & Wang, 2013; Muhamad & Nor-Azreen, 2016). Otherwise, the items should be removed.

As shown in Table 4.4, values of composite reliability for educational attainment, financial literacy, financial situation, physical health status, employment policy, life satisfaction, and resilience are 0.878, 0.778, 0.887,

0.855, 0.948, 0.756 and 0.908, respectively. These values are scored 0.7 and above implying the strong composite reliability among constructs.

As shown in Table 4.3, the values of AVE for education attainment, financial situation, physical health status, employment policy and resilience are 0.593, 0.569, 0.541, 0.752, and 0.665, respectively, except for financial literacy and life satisfaction which have the values lower than 0.5. However, the value of composite reliability for financial literacy and life satisfaction is higher than 0.6. Therefore, the convergent validity of financial literacy and life satisfaction is considered to be adequate.

Table 4.3: The results of convergent validity test

	Composite reliability	Average variance extracted
Educational attainment	0.878	0.593
Financial literacy	0.778	0.480
Financial situation	0.887	0.569
Physical health status	0.855	0.541
Life satisfaction	0.756	0.441
employment policy	0.948	0.752
Resilience	0.908	0.665

Source: Developed by PLS-SEM software

4.2.3 Discriminant Validity Test

Discriminant validity is used to measure the relationship between the constructs (Henseler et al., 2014). The discriminant validity evaluates by using cross-loading of indicators, Fornell and Larcker criterion, and Heterotrait-monotrait

(HTMT) ratio. For the requirements of Fornell-Larcker text, the constructs ³⁷ square root AVE must be greater than the correlations value between constructs and the score less than 0.9. Otherwise, when the score is more than 0.9, it shows that there are overlapping constructs.

As shown in Table 4.4, the Fornell-Larcker values for educational attainment, financial literacy, financial situation, physical health status, employment policy, life satisfaction and resilience are recorded to be 0.770, 0.693, 0.754, 0.736, 0.867, 0.664, and 0.816, respectively. Given that the score is less than 0.9, the Fornell-Larcker's key requirement ⁵⁰ (square root of AVE is greater than constructs' correlations) could be met, indicating that there is discriminant validity among all constructs.

Table 4.4: The results of Fornell-Larcker

	EA	FL	FS	HS	LS	PP	RL
EA	0.770						
FL	-0.012	0.693					
FS	0.310	0.085	0.754				
HS	0.238	0.009	0.248	0.736			
LS	0.236	0.262	0.274	0.299	0.664		
PP	0.259	-0.001	0.329	0.161	0.112	0.867	
RL	0.375	0.227	0.334	0.379	0.462	0.215	0.816

Notes: EA denotes educational attainment; FL denotes financial literacy; FS denotes financial situation; HS denotes physical health status; LS denotes life satisfaction; PP denotes employment policy; RL denotes resilience

Source: Developed by PLS-SEM software

4.2.4 Cross Loading

The requirement of the cross loading value is that the items' loading must be more than the loading value with other constructs (Hair et al., 2011). Based on Table 4.5, the highest value of cross loading under educational attainment is recorded to be 0.827 for EA4. Then, it is followed by the values of cross loading for EA1, EA2, EA3 and EA5 which are recorded to be 0.602, 0.790, 0.824 and 0.785, respectively. By looking at the constructs of financial literacy, the highest value of cross loading is recorded to be 0.838 for FL3. Then, it is followed by values of cross loading for FL2, FL4 and FL5 which are recorded to be 0.514, 0.829, and 0.515, respectively.

Next, the highest value of cross loading under financial status is recorded to be 0.818 for FS6, followed by values of cross loading for FS1 of 0.640, FS2 of 0.718, FS3 of 0.732, FS4 of 0.786, and FS5 of 0.816. Furthermore, the highest value of cross loading under health status is recorded to be 0.799 for HS2. The other values of cross loading for HS1, HS3, HS4 and HS5 are recorded as 0.695, 0.772, 0.747 and 0.657, respectively. For life satisfaction, the highest value of cross loading is recorded to be 0.726 for LS5. Then, it is followed by the values of cross loading for LS6, LS7 and LS8 which are recorded to be 0.709, 0.696, and 0.501, respectively.

Under the construct of employment policy, the highest value of cross loading is recorded to be 0.911 for PP5. Then, it is followed by the values of

cross loading of 0.777 for PP1, 0.875 for PP2, 0.890 for PP3, 0.847 for PP4 and 0.895 for PP6. Among the values of cross loading for resilience, RL2 has the highest value of cross loading of 0.885. Then, it is followed by the values of cross loading for RL1, RL3, RL4, and RL5 which are recorded as 0.815, 0.792, 0.829, and 0.752, respectively. Overall, values of cross loading for all items under constructs are greater than the cross loading in other constructs (Hair et al., 2011). As a result, the discriminant validity is confirmed.

Table 4.5: The results of cross loading

	EA	FL	FS	HS	LS	PP	RL
EA1	0.602	-0.146	0.240	0.196	0.169	0.202	0.243
EA2	0.790	-0.034	0.269	0.242	0.194	0.224	0.281
EA3	0.824	-0.072	0.277	0.148	0.149	0.247	0.289
EA4	0.827	0.062	0.238	0.162	0.194	0.181	0.322
EA5	0.785	0.109	0.178	0.174	0.200	0.154	0.299
FL2	-0.076	0.514	0.004	-0.007	0.108	-0.091	0.027
FL3	-0.032	0.838	-0.070	-0.056	0.200	-0.137	0.109
FL4	-0.025	0.829	-0.049	-0.040	0.207	-0.133	0.147
FL5	0.048	0.515	0.271	0.098	0.169	0.251	0.246
FS1	0.247	-0.098	0.640	0.123	0.160	0.218	0.179
FS2	0.209	0.088	0.718	0.278	0.190	0.150	0.312
FS3	0.193	0.073	0.732	0.140	0.151	0.318	0.252
FS4	0.222	0.116	0.786	0.182	0.259	0.235	0.228
FS5	0.255	0.111	0.816	0.134	0.247	0.293	0.286
FS6	0.285	0.042	0.818	0.249	0.213	0.287	0.230
HS1	0.215	0.005	0.171	0.695	0.151	0.058	0.232
HS2	0.167	0.126	0.172	0.799	0.252	0.135	0.339
HS3	0.164	0.099	0.155	0.772	0.230	0.137	0.266
HS4	0.177	-0.117	0.203	0.747	0.235	0.113	0.288
HS5	0.167	-0.105	0.215	0.657	0.213	0.136	0.254
LS5	0.328	0.212	0.282	0.274	0.726	0.120	0.465
LS6	0.081	0.155	0.139	0.222	0.709	0.094	0.223
LS7	0.029	0.174	0.108	0.121	0.696	0.066	0.243
LS8	-0.005	0.129	0.104	0.094	0.501	-0.067	0.130
PP1	0.150	0.023	0.307	0.156	0.038	0.777	0.105
PP2	0.237	0.083	0.324	0.149	0.113	0.875	0.237
PP3	0.144	0.099	0.249	0.127	0.107	0.890	0.172
PP4	0.270	-0.078	0.251	0.151	0.089	0.847	0.173
PP5	0.253	-0.066	0.302	0.101	0.104	0.911	0.195
PP6	0.264	-0.074	0.286	0.165	0.102	0.895	0.192
RL1	0.277	0.209	0.277	0.307	0.344	0.096	0.815
RL2	0.359	0.168	0.320	0.340	0.357	0.185	0.885
RL3	0.356	0.148	0.267	0.305	0.421	0.250	0.792
RL4	0.285	0.253	0.262	0.292	0.388	0.189	0.829
RL5	0.238	0.149	0.231	0.302	0.370	0.145	0.752

Notes: EA denotes educational attainment; FL denotes financial literacy; FS denotes financial situation; HS denotes physical health status; LS denotes life satisfaction; PP denotes employment policy; RL denotes resilience

Source: Developed by PLS-SEM software

4.2.5 Heterotrait-Monotrait (HTMT) Ratio

Lastly, the HTMT ratio is used to further assess the discriminant validity. The requirements of HTMT ratio should be below 0.85 (Kline, 2011). The score exceeds 0.7, indicating that there is a discriminant validity problem in the research framework. (Henseler et al., 2017). Based on Table 4.6, the values of HTMT ratio for educational attainment, financial literacy, financial situation, physical health status, life satisfaction, employment policy, and resilience are lower than 0.7 and 0.85. This confirms the discriminant validity for all constructs.

Table 4.6: The results of HTMT ratio

	EA	FL	FS	HS	LS	PP
EA						
FL	0.163					
FS	0.378	0.239				
HS	0.303	0.181	0.302			
LS	0.241	0.388	0.311	0.358		
PP	0.293	0.294	0.375	0.187	0.163	
RL	0.438	0.261	0.381	0.453	0.516	0.225

Notes: EA denotes educational attainment; FL denotes financial literacy; FS denotes financial situation; HS denotes physical health status; LS denotes life satisfaction; PP denotes employment policy; RL denotes resilience
Source: Developed by PLS-SEM software

4.3 Multicollinearity

The ³⁴ variance inflation factor (VIF) is used to detect multicollinearity problem in the regression analysis. Multicollinearity is the linear relationship that exists

between independent variables in the same regression model. For a rule of thumb for defining the VIF, the VIF value of 1 means that all independent variables are not correlated with each other (Hair et al., 2010).

If the VIF value falls between 1 and 5, the variables are moderately correlated and acceptable. However, there is a high correlation when the VIF value is from 5 and above, and this is a cause for concern. Some papers argue that a limit value of VIF is less than 5, implying that it is acceptable and appropriate (Ringle, Wende, & Becker, 2015). In Table 4.7, the values of VIF for all constructs are recorded to be less than 5. This demonstrates that there exists less multicollinearity among all constructs.

Table 4.7: The results of variance inflation factor (VIF)

	LS	RL
EA	1.265	1.174
FL	1.076	1.010
FS	1.272	1.239
HS	1.209	1.103
PP	1.166	1.161
RL	1.446	

Notes: EA denotes educational attainment; FL denotes financial literacy; FS denotes financial situation; HS denotes physical health status; PP denotes employment policy; RL denotes resilience.

4.4 R-Squared

R-squared is used to indicate how well the data can fit the regression model (CFI Education, 2015). Normally, a high R-squared indicates a better fit for the regression model. In terms of human behaviour-psychology, arts, humanities

and social sciences, the R-squared would be low because human behaviour cannot be accurately predicted. (Cohen, 1988; Falk & Miller, 1992; Cohen, Cohen, West, & Aiken, 2003; Minitab, 2013). In the cross-sectional modelling based on survey data, the value of R-squared normally falls around 10%-20%. Hence, the substantial value of R-squared in the context that involves the field of social sciences values should be greater than 0.10 and more than 0.26 (Cohen, 1988; Falk & Miller, 1992; Cohen et al., 2003).

As shown in Table 4.8, R-squared of 0.276, indicates that 27.6% of the variation in life satisfaction can be explained by a variation in educational attainment, financial literacy, employment policy, financial situation, and physical health status. Next, R-squared of 0.308 indicates that 30.8% of the variation in resilience can be explained by the variation in financial literacy, employment policy, financial situation, educational attainment, and physical health status. Both values of R-squared are greater than 0.26, implying on the substantial variations in explaining human behaviour.

Table 4.8: The results of R-squared

	R-squared
Life Satisfaction	0.276
Resilience	0.308

4.5 Inferential Analysis

In this study, inferential analysis is performed to detect direct and mediation effects. In line with this, the testing would be conducted on [H₁](#), [H₃](#), [H₅](#), [H₇](#) and [H₉](#) for direct effects, while [H₂](#), [H₄](#), [H₆](#), [H₈](#) and [H₁₀](#) are for the indirect effects.

4.5.1 Testing on the Determinants of Life Satisfaction

The path coefficient analysis is used to identify the direct relationship between the dependent variable and independent variables. All hypotheses are tested at the 5% level. The results of the hypothesis testing for the direct effects of the determinants toward the life satisfaction are summarized in [Table 4.9](#). The results indicate that respondents' financial literacy significantly influence their life satisfaction at 1% level, while their financial situation and physical health status are found to significantly influence their life satisfaction at 5% level. This finding suggests that working adults' financial literacy, financial situation and physical health status influence their life satisfaction. As shown in the results, both [H₇](#) and [H₉](#) cannot be supported even at 10% level. This finding indicates that respondents' educational attainment and employment policy do not significantly influence their life satisfaction.

Table 4.9: The results of hypothesis testing for direct effect

Hypothesis	Path Coefficients	P-values	Decision
H ₁ : Financial literacy is significantly related to life satisfaction.	0.181	0.001	Supported
H ₃ : Financial situation is significantly related to life satisfaction.	0.110	0.047	Supported
H ₅ : Physical health status is significantly related to life satisfaction.	0.141	0.018	Supported
H ₇ : Educational attainment is significantly related to life satisfaction.	0.061	0.418	Not supported
H ₉ : Employment policy is significantly related to life satisfaction.	-0.030	0.586	Not supported

4.5.2 Testing on the Mediation Effect of Resilience on the Determinants Toward Life Satisfaction

Mediator explains the causal path between the independent and dependent variables. In the study, the analysis of indirect effect and VAF is performed to examine whether or not the resilience can mediate the relationship between the determinants toward life satisfaction. All the hypotheses are tested at the 5% of significance level.

Based on [Table 4.10](#), the results of the mediation analysis show that resilience significantly mediates the relationship between financial literacy, financial situation, and physical health status toward life satisfaction at 1% significance level, while resilience significantly mediates the relationship between educational attainments towards life satisfaction at 5% significance level. As a result, [H₂](#), [H₄](#), [H₆](#) and [H₈](#) are supported. However, resilience does

not mediate the relationship of employment policy towards life satisfaction.

Thus, H_{10} fails to be supported.

Table 4.10: The results of hypothesis testing for mediation effect

	Indirect effect		VAF analysis	Significant/not significant
	Coefficient	P-values		
H_2 : Financial literacy is mediated by resilience towards life satisfaction	0.068	0.001	27% (partial mediation)	Significant
H_4 : Financial situation is mediated by resilience towards life satisfaction.	0.048	0.026	30% (partial mediation)	Significant
H_6 : Physical health status is mediated by resilience towards life satisfaction.	0.085	0.000	38% (partial mediation)	Significant
H_8 : Educational attainment is mediated by resilience towards life satisfaction.	0.079	0.010	56% (partial mediation)	Significant
H_{10} : Employment is mediated by resilience towards life satisfaction.	0.018	0.263	Suppressor effect (less than 20%)	Not Significant

Source: Developed for study

Furthermore, the VAF analysis is conducted to measure the level of mediation (Andrei, Gazzola, Zbucnea, & Alexandru, 2017). The analysis classifies that when the VAF value is lesser than 20%, the construct does not mediate the relationship between the dependent and independent variables (no mediation), while the VAF value falls between 20% and 80%, implying that the construct partially mediates the relationship between dependent and independent variables (partial mediation). When the VAF value is more than 80%, it shows that the construct fully mediates the relationship between dependent and independent variables (full mediation). In one case, the value of VAF can be greater than one when the total effect is smaller than the indirect effect (Shrout & Bolger, 2002). If the case provides the negative or infinity value of VAF, this case is called inconsistent mediation or suppressor effect (Hayes, 2009; MacKinnon, Krull, & Lockwood, 2010).

As shown in Table 4.11, the VAF value of 0.27 for H₂ indicates that resilience could explain 27% of financial literacy impact on working adults' life satisfaction. H₄ suggests that resilience has 30% effect to mediate the relationship of financial situation influence and working adults' life satisfaction. Furthermore, the VAF value of 0.38 for H₆ indicates that resilience has 38% of mediation effect on physical health status towards life satisfaction. For H₈, its value of 0.56 indicates that resilience has 56% mediation effect on the relationship of educational attainment towards life satisfaction. For H₁₀, its VAF is found to yield a negative value, indicating smaller total effect than indirect effect. This finding suggests that resilience does not play the role in mediating the relationship between employment policy and life satisfaction.

Table 4.11: The results of variance accounted for

Variables	VAF= $\frac{\text{indirect effect}}{\text{total effect}}$	Strength of mediation
Financial literacy	$\frac{0.068}{0.248} = 0.27$ (27%)	Partial relationship effect on the relationship between variables. (0.2-0.8)
Employment policy	$\frac{0.018}{-0.012} = -1.5$	Suppressor effect on the relationship between variables.
Financial situation	$\frac{0.048}{0.158} = 0.3$ (30%)	Partial relationship effect on the relationship between variables. (0.2-0.8)
Health status	$\frac{0.085}{0.226} = 0.38$ (38%)	Partial relationship effect on the relationship between variables. (0.2-0.8)
Educational attainment	$\frac{0.079}{0.140} = 0.56$ (56%)	Partial relationship effect on the relationship between variables. (0.2-0.8)

Note: VAF denotes variance accounted for
Source: Developed for study

4.6 Result Discussion

Based on the results, the decisions for H₁-H₁₀ are stated in Table 4.12.

Table 4.12: Summary of the results of hypothesis testing

Hypothesis		Supported	Not supported
H ₁ :	Financial literacy is positively associated with life satisfaction.	√	
H ₂ :	Financial literacy is positively mediated by resilience towards life satisfaction.	√	
H ₃ :	Financial situation is positively associated with life satisfaction.	√	
H ₄ :	Financial situation is positively mediated by resilience on life satisfaction.	√	
H ₅ :	Physical health status is positively associated with life satisfaction.	√	
H ₆ :	Physical health status is positively mediated by resilience towards life satisfaction.	√	
H ₇ :	Educational attainment is positively associated with life satisfaction.		√
H ₈ :	Educational attainment is positively mediated by resilience on life satisfaction.	√	
H ₉ :	Employment policy is positively associated with life satisfaction.		√
H ₁₀ :	Employment policy is positively mediated by resilience towards life satisfaction.		√

Source: Developed for study

4.6.1 The influence of Financial Literacy on Life Satisfaction

The results in Table 4.12 show that financial literacy significantly affects the level of life satisfaction. This finding is consistent with those findings of Barand and Imanian (2017), Hassibuan and Lubis (2017) and Ilies et al. (2019).

Working adults who possess a higher level of financial literacy (financial knowledge) of managing their money allocations would have a higher level of life satisfaction. In addition, resilience is found to mediate the relationship between financial literacy and life satisfaction. This finding is supported by the studies of [Maison \(2019\)](#) and [Jayasinghe et al. \(2020\)](#). Those working adults who have resilience could improve their financial literacy by reaching their financial goals, thereby improving their life satisfaction. For example, individuals can better allocate their lifetime resources (saving and income for spending, lending, borrowing and investing) and persist with the daunting process of financial management in a world of uncertainty.

For those with financial knowledge, they could make wiser financial decisions by preparing a proper planning of financial matters to maintain a low debt ratio and proper money allocation. It also beneficial for any helplessness in the event of emergencies. As a result, their money management ability would uplift their life satisfaction. The results demonstrate that resilience can develop good individual financial behaviour to promote their financial literacy and improve their financial decision-making skills. In turn, those with higher financial capability tend to have better life satisfaction in general. Resilient people are more satisfied with their life because they feel better when they would use their ability to develop financial resources for living well.

4.6.2 The Influence of Financial Situation on Life Satisfaction

As shown in [Table 4.12](#), the results support Hypothesis 3 (H₃). This finding is consistent with the study of [Ngamaba \(2016\)](#) and [Jovanovic and Joshanloo \(2019\)](#), indicating that there is a significant relationship between financial situation and life satisfaction. People with a better financial situation will have a high level of life satisfaction. Furthermore, Hypothesis 4 (H₄) is found to be supported in this study, demonstrating that resilience mediates the relationship between financial situation and life satisfaction. This finding demonstrates that those resilient people tend to use their strength to increase their financial situation and thus enhance their life satisfaction level. This is consistent with those findings of [Ngamaba \(2016\)](#) and [Lee and Lee \(2019\)](#).

Those individuals who have better financial situation may result in the enhancement of their living conditions such as nutrient enhancement, quality of food, good health status and higher education opportunities. When people are suffering from financial concern, they are likely to live life frugally. As a consequence, their life satisfaction would be negatively affected. The sufficient high level of incomes could make individuals no longer need to worry about their financial situation, resulting in their life satisfaction. Furthermore, those resilient people undoubtedly experience financial stress as well, but fortunately they manage to apply supportive measures (e.g., good career, investment) and use their strengths, skills and resources in addressing their financial issues to achieve financial stability. As a result, they can pay off and stay out of debt and

prepare for the future (savings). With such advantages in life, they can achieve better life satisfaction.

4.6.3 The Influence of Physical Health Status on Life Satisfaction

The results support Hypothesis 5 (H₅), stating that physical health status significantly affects the life satisfaction level among working adults. This finding is consistent with those findings of [Goel, Rossella, and Fu \(2018\)](#), [Pan, Chan, Xu, and Yeung \(2019\)](#) and [Jovanovic and Joshanloo \(2019\)](#). This finding implies that people who possess good physical health status could have a higher life satisfaction level. Moreover, resilience is found to mediate the impact of physical health status towards life satisfaction ([Guo, 2017](#); [Yang, Xia, Han, & Liang, 2018](#); [Yildirim, 2019](#)). As stated by Hypothesis 6 (H₆), those workers with a resilient mindset tend to develop good health behaviours to maintain good physical health status, which enhances their life satisfaction level due to a lower tendency of getting stressed or depressed and falling ill.

The finding demonstrates that positive health status acts as a state of well-being. Good health status can positively influence the abilities and work productivity of an individual, enabling individuals to contribute to the community. This subsequently gives a sense of accomplishment. In turn, they

could improve the life satisfaction level. On the contrary, people with health problems will indicate low level of life satisfaction.

Furthermore, resilience can improve the level of life satisfaction when people use their resilience skills to develop good health behaviours in order to promote a healthy lifestyle. In general, a healthy lifestyle is found to be useful in preventing various physical and mental illnesses. Thus, they are likely to have a better life satisfaction level. For working adults, this is common for them to encounter financial and work-related stress in their daily lives. In this case, resilience skills become crucial for them to cope with stress and hardship without getting themselves into unhealthy behaviours and achieve a higher life satisfaction level. In conclusion, resilient people could improve their health status and life satisfaction.

4.6.4 The Influence of Educational Attainment on Life Satisfaction

Surprisingly, the results in [Table 4.12](#) show that educational attainment and life satisfaction have an insignificant relationship, leading to the rejection of Hypothesis 7 (H₇). This indicates that higher educational attainment would lower the life satisfaction level. However, the finding contradicts those findings¹⁴ of [Clins et al. \(2009\)](#), [Zanjani et al. \(2017\)](#) and [Hoensey et al. \(2018\)](#). In

contrast, resilience is found ² to mediate the relationship between educational attainment and life satisfaction, supporting Hypothesis 8 (H₈). This supports the fact that those resilient people who attained higher education could enhance their life satisfaction level. Similar findings are reported in the works of [Ainize, Estibaliz and Oihane \(2018\)](#) and [Kilinc, Yildiz and Kavak \(2019\)](#).

Those people with varying educational backgrounds regardless of the level of education) tend to have high expectations for their career, promotion and income level. When their high expectations are not achieved, their psychological well-being would be offset. This statement is further supported by [Graham, Zhou and Zhang \(2017\)](#) who state that people with higher education level might experience dissatisfaction with their life due to the failure in meeting their high expectations on their living standards. On the other hand, people with a lower level of education might easily be satisfied with their current simple living conditions. Therefore, it is important to develop resilience skills to cope with the possible disappointments in life. Besides, resilient people tend to have better behaviours towards education, attitudes, social and emotions that improve their academic performance and educational attainment in getting better job opportunity and promotion, thereby, increasing their overall satisfaction in life.

4.6.5 The Influence of Employment Policy on Life Satisfaction

The results reject Hypothesis 9 (H₉), indicating an insignificant relationship between employment policy and life satisfaction. This finding is consistent with those findings of [Lee and Lee \(2019\)](#) and [Ngoo et al. \(2020\)](#). The implementation of policies does not relate with the life satisfaction of working adults.

Furthermore, the results also show the rejection of Hypothesis 10 (H₁₀) to indicate that resilience does not mediate the impact of employment policy on the life satisfaction of working adults. Similar findings are found in the study of [Capano and Woo \(2017\)](#), where their finding indicates that resilience has little to no effect on the mindset regarding the implementation of employment policy, causing the employment policy to not leave any impact to the improvement of the life satisfaction level. The rejection of both hypotheses indicates that individuals who have resilience or not would not concern too much on how the proposed and implemented employment policy could influence their standard of living. The reason to support this finding is that they are more concerned on how to increase their productivity to get job promotion in the most competitive workplaces or metropolitan area. Consequently, the daily lifestyle of working adults still remains the same regardless of uncertainties in policy changes.

4.7 Conclusion

In summary, the results confirm that all of the constructs such as financial literacy, financial situation, educational attainment, physical health status, and employment policy are reliable and valid before the hypotheses testing. After that, the direct and mediation effect (indirect) would be tested. The results of the direct effect show that hypotheses of H_1, H_3 and H_5 are supported, while H_7 and H_9 are rejected. Followed by the mediation effect, the hypotheses (H_2, H_4, H_6 and H_8) are also supported except H_{10} .

CHAPTER 5: CONCLUSION

5.0 Overview

This chapter starts with the main findings derived from the analysis. Next, it is followed by some suggested theoretical and practical implications according to the main findings. Lastly, the limitations of this study and recommendations for future studies are highlighted.

5.1 Main Findings

This study aims to investigate the determinants and mediation effects of resilience towards the life satisfaction among working adults in WPKL. A total of five hypotheses, namely **H₁**, **H₃**, **H₅**, **H₇** and **H₉** are developed to achieve the first objective. The results show that there exist significant positive relationships between financial literacy, financial situation and physical health status with the working adults' life satisfaction. However, an insignificant relationship between educational attainment and employment policy with the life satisfaction of

working adults is found. These findings demonstrate that employment policy and educational attainment are not the main determinants of the working adults' life satisfaction since their daily lifestyle still remains the same regardless of policy changes and uncertainties. On the other hand, those individuals who are highly educated tend to have high expectations for their job promotion and income level. When their expectations could not be met, they are prone to feel dissatisfied with their lives.

The first main finding from the result is that financial literacy has a stronger direct impact on life satisfaction as compared to financial situation and physical health status. The reason behind it is that WPKL is a metropolitan area with high cost of living, high non-performing loan and an increasing number of bankruptcy cases. The ¹ main problem associated with low level of financial literacy is that those individuals who suffer from credit issues may be prone to experience bankruptcy. Also, ¹ individuals may not fully utilise their “idle” money in profitable investment opportunities. As the world progresses, individuals may need more money and more needs, and thus, financial products have become more complex. Therefore, financial literacy refers to the ability to understand the ways in which different financial skills can be applied effectively from their financial knowledge, so that financial stability can be accomplished.

Furthermore, financial literacy is about ²⁴ measuring how well an individual can use and understand personal finance-related information. When individuals have the right financial-related information, they can analyse the

information before making any financial matter decisions. For example, when managing personal financial-related information, they can decide to pay larger periodical instalment but smaller total loan repayment and vice versa. When individuals grow older, their expenses expand as they need to put aside their savings for retirement. At the same time they need to cater for or fulfil other financial needs such as investment activities, paying off loans and funding their children's education.

Those individuals with a lack of financial literacy tend to make welfare-reduction decisions such as maintaining large amount of outstanding on credit cards, loans, and high expenses. In short, low level of financial literacy would negatively affect their satisfaction of life. For those with financial literacy, they could make rational financial decisions by preparing a proper planning of financial matters thereby ensuring their sustainability of financial status. When individuals enjoy their financial stability, they have access to better nutrition and quality of food, better healthcare, higher education opportunities and better shelter. As a result, their money management ability would contribute to increased life satisfaction.

The second objective of this study is to examine the mediating effect of resilience on financial literacy, financial situation, physical health status, educational attainment and employment policy toward life satisfaction. A total of five hypotheses was developed to test the mediating effects. The results demonstrate that resilience could mediate the relationship between financial

literacy, financial situation, physical health status and educational attainment with life satisfaction. However, resilience is found to not ¹⁵ mediate the relationship between employment policy and life satisfaction. The reason is that political uncertainties may influence their decisions in allocating their incomes for consumption and saving. Political uncertainties may cause those adults to be more cautious in spending their money. They are likely to choose saving over spending to handle the uncertainties. As a result, they tend to consume less in daily life, hence, lowering their living conditions. Under such condition, their life satisfaction is eventually low.

Resilience is found to have a stronger mediating effect on physical health status towards the life satisfaction, as compared to financial literacy, financial situation, and educational attainment. This finding suggests that the WPKL is a high economic demand for treatment and habitation in the capital city of the country, causing individuals aged 20-39 years old to experience profound changes to their lifestyle. These individuals need to face rapid personal development to experience major transitions of life, such as leaving the parental home, education, starting employment, confronting economic challenges and a dealing with a prolonged transition to middle-late adults. These transitions may influence their physical health behaviour due to the rapid environment change and the stressful competitive workplace. As a result, risky health behaviour causes poor physical health status and negatively affects their life satisfaction.

Coping with the physical health problems in a positive way is known as resilience. In order to survive, individuals need to cultivate their resilience skills to develop good health behaviour. Resilience is one of the factors of enhancing individuals' health awareness that causes their quick response to change their health behaviour to cope with the stress in having a good healthy life. Additionally, those individuals with better health behaviours can avoid developing risky behaviours, such as smoking, excessive alcohol consumption and drug abuse. Therefore, those m with good health status could have a relatively low depression rate and greater satisfaction with life. Due to the high cost of medical expenses that leads to financial instability, those individuals who are not resilient may not be able to handle their problems well in difficult situations, which would harm their physical health status and negatively affect their satisfaction of life. Our findings are compared with the existing findings.

5.2 Policy Implications

The findings of the study are expected to provide some insights for working adults in improving their life satisfaction. Based on the findings, theoretical and practical implications are suggested as follows.

5.2.1 Theoretical Implication

The higher level of life satisfaction would benefit individuals in various aspects, such as job, physical health, mental health and others. The finding indicates that poor health status is strongly related to life dissatisfaction because poor health would influence the work productivity of individuals, and thus, negatively affect their daily lives. Meanwhile, WPKL is listed as the fourth most overworked cities in the world. This means that individuals who are overworking may tend to put stress on their mental health. Consequently, they would engage in risky activities such as smoking, excessive alcohol consumption and drug abuse. Therefore, individuals are suggested to equip with resilience skills in order to overcome and avoid any health problems.

Based on the existing literature, [Mcknight, Huebner and Suldo \(2002\)](#) find that life satisfaction can function as an intrapersonal strength when individuals possess the psychological resilience to cope with their adversities, difficulties and tense situations. Typically, those individuals who have the resilience skills would think positively and rationally and seek effective ways to solve the adversities and difficulties in their life rather than being overwhelmed by panic and negative emotions. Also, [Zeti \(2018\)](#) and [Ting and Foo \(2018\)](#) claim that all Malaysians should develop psychological resilience to handle any adversity, work-related stress and difficult experiences in their working life with an open mind. On top of that, Malaysians could be flexible

and adaptable although they face many psychological challenges, thereby solving the adversity effectively.

From the existing studies, this study integrates the bottom-up theory that considers various aspects of personal-related matters in influencing working adults' life satisfaction. To further improve the bottom-up theory in explaining life satisfaction, this study incorporates psychological resilience that acts as a mediator.

5.2.2 Practical Implications

Based on the findings, this study suggests a few practical implications for policymakers. Firstly, the key finding of the direct effect study shows that financial literacy is one of the determinants with a strong significant relationship with life satisfaction among working adults. Secondly, the indirect effect study shows that resilience has a strong mediating effect on the relationship between physical health status and life satisfaction. Hence, efforts must be made in order to improve individuals' life satisfaction, especially those residing in the metropolitan area. To increase the life satisfaction of working adults, policymakers may focus on the financial literacy and physical health status of the workers.

This study suggests that the Malaysian Financial Planning Council (MFPC) focuses on financial literacy programmes. For example, the MFPC could improve courses to enhance the financial knowledge and financial attitudes of working adults, as well as to train them to practise good financial management behaviours. Next, the government is recommended to encourage saving habits and improve financial literacy among school students. For example, implementing financial education in the form of “children’s banks” which are formally offered in Japan and some saving-related promotions in primary and secondary schools. It allows students to experience interest calculations and understand the value of money. This may improve their saving habits, financial knowledge and financial management behaviour. To ensure a sustainable lifestyle among workers, the companies can also organise a series of training with the Credit Counselling and Debt Management Agency (AKPK) to improve their employees in terms of financial literacy and raise their employees’ awareness on financial scams.

Next, the government could organize various campaigns and programmes to encourage physical activities among working adults for example, the provision of physical activity assessment and advice as a part of the general healthcare services, working alongside communities in the provision of local physical activity programmes and promoting “sport for all”. The government could also invest in effective psychological interventions in the workplace that would reduce mental health problems significantly. For instance, the government could promote primary care prevention of physical ill-health

among working adults with mental disorders and focus on improving the integration of mental and physical health care.

To raise health awareness, the government can also revise organizational practices and engage Employee Assistance Program services for employees such as independent and professional counsellors. This mental health support could help to manage stress, health issues, family, or personal problems. A healthy workplace is where employees enjoy working and look forward to contributing their services daily, demonstrating good morale. Eventually, the boost in the work productivity can improve their living conditions that would, to a greater extent, contribute to their satisfaction in life.

5.3 Limitations of the Study

There are two limitations in the study. First of all, this study explores workplaces with the highest cost of living and stress level. Therefore, the sample size is only concentrated on working adults who are staying in the WPKL. As a result, it may lead to a lack of comprehensive analysis to represent life satisfaction in the whole country since the analyses on other states in Malaysia have not been carried out.

Secondly, this study focuses on working adults who are in the age range of 20 to 39 years old. Those adults from such a group would tend to encounter high depression and bankruptcy rate. Therefore, the results only represent the early and middle age groups (aged 20-39), while excluding the late middle and late adulthood age groups (aged 40 and above). Hence, the variety of profiles of the study population fully represents the whole working group.

5.4 Recommendations for Future Research

To provide a comprehensive understanding of the life satisfaction of the citizens in Malaysia, future researchers are recommended to focus on all capital cities in each state in Malaysia. For example, Georgetown, Ipoh, Kuantan, Kuala Terengganu, Alor Setar, Kangsar, Kota Bharu, Seremban, Malacca City, Shah Alam, Putrajaya and Johor Bahru in West Malaysia, also Kuching, Kota Kinabalu and Labuan in East Malaysia. A comparative analysis is recommended among major cities in order to reflect the actual scenario in examining life satisfaction among Malaysians.

Lastly, this study excludes the elderly population who are still engaged in jobs. The life satisfaction of this particular population can be studied in future. Future studies can also be performed through a comparative analysis between the early and middle age groups and the middle and late adulthood age groups.

It is expected to provide more insights into life satisfaction across different age groups in the country. On top of that, future researchers can explore the social, emotional and psychological aspects of life satisfaction. In order to obtain a more comprehensive findings, the researchers can use qualitative research to further focus on those aspects that influence Malaysians' life satisfaction.

5.4 Summary of the study

To conclude, this study seeks to investigate the direct and indirect relationships between independent and dependent variables among 20-39-year-old working adults in a metropolitan area, WPKL. The main findings demonstrate that those individuals who have financial literacy tend to have better satisfaction in their life. In addition, resilience plays a role as the mediator in influencing individuals' physical health status and life satisfaction. Lastly, several recommendations are suggested for future research to explore further into the research area that relates to the topic.

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