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THE RELATIONSHIP BETWEEN SELF-ESTEEM, OPTIMISM, AND RESILIENCE
AMONG UNDERGRADUATES IN MALAYSIA

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A RESEARCH PROJECT

SUBMITTED IN

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FACULTY OF ARTS AND SOCIAL SCIENCE

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SELF-ESTEEM, OPTIMISM, AND RESILIENCE

The Relationship between Self-Esteem, Optimism, and Resilience among
Undergraduates in Malaysia

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This research project is submitted in partial fulfillment of the requirements for the Bachelor of Social Science (Hons) Psychology, Faculty of Arts and Social Science, Universiti Tunku Abdul Rahman. Submitted in November 2022.

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APPROVAL FORM

This research paper attached hereto, entitled “The relationship between self-esteem, optimism, and resilience among undergraduates in Malaysia”, prepared and submitted by Archanaa A/P Muthiah, Beh Jin Xuan, and Kayathri A/P Krishnamurthi in partial fulfilment of requirements for the Bachelor of Social Science (Hons) Psychology is hereby accepted.

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Abstract

Students' adaptability to university life is considered a growing physical and psychological distress that undergraduate students experience. Resilience has grown more common among undergraduates; hence, several psychological elements were viewed as a stage of development that may influence a person's academic transition. The present study investigated the relationship between self-esteem and optimism as predictors of resilience among Malaysian undergraduates by implementing the resilience theory. A quantitative cross-sectional study was conducted online among Malaysian undergraduates aged between 19 to 25 years old. A total of 153 participants were recruited for the present study via the convenience sampling method. After all, only 59 participants were used for the data analysis according to the calculated sample size. Online questionnaires were distributed across various social media platforms, which include Facebook, Microsoft Teams, E-mail, and WhatsApp. The variables of this study were measured by using Rosenberg Self-Esteem Scale (RSES), Revised Life Orientation Test (LOT-R), and Brief Resilience Scale (BRS). The findings revealed that self-esteem and optimism were significant and positively predicted resilience among undergraduates in Malaysia by using Multiple Linear Regression. In conclusion, present study may provide a greater understanding of relevant topics as well as essential references and suggestions for future researchers. Legal authorities could be able to use the insights to adopt new measures that can assist students in improving their resilience in the future.

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Keywords: resilience, self-esteem, optimism, significant, undergraduates, university
Malaysia

DECLARATION

We declare that the material contained in this paper is the end result of our own work and due to the acknowledgement has been given in the bibliography and references to ALL sources be printed, electronic or personal.

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List of Abbreviations

Abbreviations

BRS	Brief Resilience Scale
K-S Test	Kolmogorov-Smirnov Test
LOTR	Revised Life Orientation Test
MLR	Multiple Linear Regression
P-P Plot	Probability-Probability plot
RSES	Rosenberg Self-Esteem Scale
SERC	Scientific and Ethical Review Committee
SPSS	Statistical Package for Social Sciences
UTAR	University Tunku Abdul Rahman
VIF	Variance Inflation Factor

Chapter 1

Introduction

Background of Study

Resilience is a term with more components in its content but examining the personality qualities among those individuals who demonstrate adaptable recovery during adversity is essential because important information beneficial for psychological health development may be collected. In this way, resilience is regarded as a dynamic process manifesting concerning life circumstances and individual personality profiles (Dyrbye & Shanafelt, 2012). The previous study on resilience has generally focused on individuals who have faced both short and long-term challenges (Wagnild & Collins, 2009). Although there is no standard definition of resilience, it is usually seen as an individual's ability to endure adversity and successfully adapt to their circumstances (Wagnild & Young, 1993).

Several studies have been conducted based on foreign context. For instance, a study by Karatas and Cakar (2011) in Turkey has mentioned that self-esteem has been identified as a significant determinant contributing to resilience. This finding can be viewed as an individual's resilience increases, followed by self-esteem. Furthermore, as an individual's self-esteem grows, so does their capacity for struggle and indomitability increases. There is a positive correlation between resilience and self-esteem among Turkey university students (Kapikiran & Acun-Kapikiran, 2016). Apart from that, when faced with a struggle, those who are optimistic can still demonstrate perseverance, even if progress is slow-going and challenging (Snyder et al., 2002). There is a substantial positive relationship between resilience and optimism. In adverse situations, it appears that optimism and resilience go together. As a result, it is claimed that there is a relationship between international students' resilience and optimism (Sabouripour & Roslan, 2015).

Therefore, the current study aims to examine the relationship between self-esteem, optimism, and resilience among undergraduates in Malaysia. Furthermore, the role of self-esteem and optimism as predictors will be considered in order to determine if it positively or negatively predicts the relationship between resilience.

Self-esteem is defined as the evaluation and subjective dimension of self-concept, reflecting the whole person's concepts and knowledge of personal traits and qualities (Mann et al., 2004). According to Mann et al. (2004), the sociometer theory of self-esteem represents an individual's emotional state of integration into interpersonal interactions, and self-esteem is a subjective assessment of a person's relationship with society and vital person. It is arduous to describe self-esteem accurately because various studies have brought alternative implications. Assari and Moghani (2018) mentioned that self-esteem is regarded as both the cause and the outcome of mental well-being, which could be decreased or increased.

Self-esteem is commonly described as a positive factor in our daily life. Many studies have highlighted the function of self-esteem as a mediator in the setting of any difficult or unpleasant situation (Arslan, 2016), in which an individual's subjective evaluations of their value as a person (Orth & Robins, 2014) influence the ability in coping with challenges and may improve well-being. Self-esteem has been highlighted as a key element in an individual's growth. For instance, Arslan (2019) mentioned that findings regarding self-esteem appeared to have a role in the relationship between social exclusion and life satisfaction. To put it another way, social exclusion anticipates self-esteem, which predicts life satisfaction in turn decreases the effects of social exclusion on life satisfaction.

Recent longitudinal research exploring the development of self-esteem and its effect constituted new insights (Orth & Robins, 2014). These self-esteem studies concentrated on several variables. For example, a study by Harris and Orth (2020) tested the correlations between self-esteem and social relationships. The research outcome reveals that an

individual's social interactions improve when they have strong self-esteem. Furthermore, the weighted mean effects were identical on both sides, implying that the connection between self-esteem and social relationships is mutual throughout all developmental stages, indicating a positive virtuous cycle between the dimensions.

According to Scheier and Carver (1985), optimism is the broad belief that one will typically encounter positive versus unpleasant results in life. Pessimists anticipate awful things to happen to them, whereas optimists expect positive things to happen to them. As a result, an individual assumes that when a goal is significant, they will act to achieve it, expecting successful results. Hutz et al. (2014) added that optimism could appear to be higher since reaching the objective depends on a collective effort rather than an individual subject. To perform an activity search for something, the person must consider that the outcome will be beneficial, even if it does not rely only on its own activities. Consequently, optimism will lead the individual to have positive thinking.

Optimism plays a significant role in predicting resilience among international students. Nevertheless, optimism can significantly and strongly influence an individual's adaptability to stressors (Sabouripour & Roslan, 2015). Optimism refers to two closely related concepts which include the disposition to hope and believe we live in the best of all conceivable worlds. The public perceives optimism as seeing the glass half full, expecting a satisfying resolution to any problem, or having a reasonable expectation for events and results (Conversano et al., 2010). This shows that optimism is key in determining compatibility with a significant life milestone.

Problem Statement

Students' adaptability to adjust to university life allows many to make a successful transition, whereas others suffer significant challenges. Wani and Dar (2017) noted that self-esteem and optimism are crucial features of emotional well-being. For example, these aspects

have extreme and inevitable results on students' academic achievement, motivation, attentiveness, behavior, and feelings. According to Arshad et al. (2015), there was a significant positive correlation between academic achievement, self-esteem, and optimism. Besides, a relationship between self-esteem and optimism has been shown in past studies (Agberotimi & Oduaran, 2020). Bagana et al. (2011) mentioned that correlational analysis had identified a significant positive relationship between self-esteem and optimism among students.

Resilience literature has gained recognition for explaining why some students adjust well to university life while others struggle. Given that resilience is defined as the ability to adapt in the face of stress and adversity successfully, it is crucial to figure out what psychological elements lead to increased resilience (Molinero et al., 2018). Moreover, optimism makes a person more resilient, thus, if adversity strikes one's life and the person has an upbeat attitude about life, they will bounce back at least as strong as before (Maheshwari & Jutta, 2020). The studies have shown a positive relationship between optimism and resilience (Panchal et al., 2016; Pathak & Lata, 2018), revealing that optimism was a strong predictor of resilience among university students. This suggests that pupils with high aspirations for their future will be more adaptable when faced with adversity. Furthermore, optimistic undergraduates will adjust better to the additional stressors they encounter during this transition, such as financial strain and academic pressure (Gómez Molinero et al., 2018).

The research found out there is a positive correlation between self-esteem and resilience, which means high self-esteem helps university students cope with the adverse condition and bounce from the stress, and increased resilience helps to have high self-esteem due to practical coping abilities to deal with stress (Sneha Mittal et al., 2019). Studies found that self-esteem positively predicts resilience (Barbas, 2009; Harikrishnan & Ali, 2018). High

resilience makes individuals more flexible in dealing with uncertainty and pressure, self-regulation, and openness to accept new challenges (Loh et al., 2013), which is essential for academic performance and maintaining good mental health (Ang et al., 2021). However, the resilience of Generation Z students might be poor due to a lack of exposure to adversity (Ang et al., 2021). Abai and Madihie (2021) mentioned that since Covid 19 pandemic, virtual learning, quarantine, and activities restrictions have led to anxiety and stress for students, and low resilience may prolong the emotional disorders.

Considering the growing physical and psychological distress that undergraduate students experience, it is nearly difficult not to discuss the negative psychological effects, especially in the context of the mental health sector. Self-esteem, optimism, and resilience are just a few of the many factors that come up in discussions on the effects of challenges. This assignment aims to study the correlation between the variables and to study self-esteem and optimism as predictors of resilience by using Pearson correlation and MLR as statistical analysis. The study explores more connections about the above-mentioned variables to fill our knowledge gap that does not point up in past studies on undergraduate students and provides preliminary support and reference for future research.

Research Objectives

With support from the problem statement stated above. The present study proposed the following research objectives:

1. To examine the correlation between self-esteem and resilience among undergraduates in Malaysia.
2. To examine the correlation between self-esteem and optimism among undergraduates in Malaysia.
3. To examine the correlation between optimism and resilience among undergraduates in Malaysia.

4. To determine the role of self-esteem as predictors of resilience among undergraduates in Malaysia.

5. To determine the role of optimism as predictors of resilience among undergraduates in Malaysia.

Research Questions

The following research questions were aimed to be answered by the present study:

1. Is there any significant relationship between self-esteem and resilience among undergraduates in Malaysia?
2. Is there any significant relationship between self-esteem and optimism among undergraduates in Malaysia?
3. Is there any significant relationship between optimism and resilience among undergraduates in Malaysia?
4. Does self-esteem positively predict resilience among undergraduates in Malaysia?
5. Does optimism positively predict resilience among undergraduates in Malaysia?

Research Hypothesis

The research hypotheses of the present study were as follow:

H1: There is a significant relationship between self-esteem and resilience among undergraduates in Malaysia.

H2: There is a significant relationship between self-esteem and optimism among undergraduates in Malaysia.

H3: There is a significant relationship between optimism and resilience among undergraduates in Malaysia.

H4: Self-esteem positively predicts resilience among undergraduates in Malaysia.

H5: Optimism positively predicts resilience among undergraduates in Malaysia.

Significance of the study

Understanding that self-esteem, optimism, and resilience are crucial aspects of emotional well-being is necessary for undergraduates to enhance their progress in their academic advancement. The main idea of the Self-Esteem Theory is that everybody believes they have intrinsic “worth” and strives to develop that value. Furthermore, praising may boost self-esteem and build it when rewards in the form of praise are provided for genuine success. Self-esteem may be built by attaining significant achievement and sustained by avoiding setbacks (Aryana, 2010). Hence, through understanding the role of resilience, self-esteem may cultivate future generations in the process of developing a better society.

Optimism tended to anticipate positive future implications because when optimists confronted challenges but potentially manageable hurdles, they attempted to address the issues and focus on their goals, dealing with problem-solving and cautious preparation (Carver et al., 2010). Optimism assisted students in dealing with university or college problems (Miranda & Cruz, 2020). Resilience traits are required to cope with change effectively and are the strongest predictor of adjustment. Tusaie and Dyer (2004) stated that resilient students might cope with the challenges of attending a university in a foreign nation and achieve academically. Thus, by understanding how self-esteem and optimism function as predictors of resilience, university students and lecturers may acknowledge and comprehend the relationship between self-esteem, optimism, and resilience in order to deliver the knowledge needed to excel academically.

Through this research, we may also fill the knowledge gap in our society about optimism and resilience through this study. There was a lack of research that examines the relationship between self-esteem, optimism, and resilience among undergraduates in Malaysia. This research might assist students in solving their life transition by enhancing their well-being and lowering university absences. Hence, this study may provide

information and results for future studies with the data collected among Malaysian undergraduates.

Conceptual definition

Self-esteem. Self-esteem is a psychological attribute that refers to a person's perception of self-worth and confidence in all facets of human activity (Rosenberg, 1965). Individuals with greater self-esteem are happier in their life, have fewer interpersonal issues, accomplish at a higher and more consistent level, and are less prone to psychological disorders and illnesses (Brown, 2014). Self-esteem relates to how individuals feel about themselves as a whole, which is also known as global self-esteem or global self-worth (Brown, Dutton, & Cook, 2001).

Optimism. Positive expectations for the future, optimistic attributions, the illusion of control, and self-enhancing biases have all been used to define optimism (Kleiman et al., 2017). According to Karawi et al. (2012), WHO (2004) indicates optimism as a psychological process that creates thoughts, feelings of satisfaction and endurance, confidence, distant thoughts, hope, and feelings of despair. Optimism is described by two key components, which include "learned optimism" (Peterson & Seligman, 1984) and "dispositional optimism" (Scheier & Carver, 1985). Learned optimism is considered a personal trait rather than a situational explanatory style. There are many social components that determine optimism, such as school, family, media, and society.

Resilience. Resilience is viewed as a process at both the personal and social levels, rather than a fixed condition, emphasizing dynamic interactions and approaches (Grubbström, Stenbacka, & Joosse, 2014). Psychologists define resilience as the ability to return when confronted with adversity continually. The study of resilience indicated that it is not an innate ability, but rather one that develops through the time when confronted with obstacles (Sam &

Lee, 2020). Thus, resilience is the capacity to withstand hardship and develop stronger as a result of the experience (Thomas & Asselin, 2018).

Operational Definition

Self-esteem. In this study, The Rosenberg self-esteem scale can be used to assess self-esteem. This self-report measure consisted of ten items used to assess overall self-worth. It is used to measure both positive and negative self-perceptions. The results would be added together, and greater scores would indicate more self-esteem.

Optimism. The Life Orientation Test Revised (LOT-R) assesses optimism (Scheier & Carver 1985). It is a 7-item assessment scale that includes optimistic statements such as “In uncertain times, I usually expect the best,” “I’m always optimistic about my future,” and “Overall, I expect more good things to happen to me than bad”.

Resilience. The resilience scale is a standardized scale used to assess resilience. It is a 25-item response scale that assesses an individual’s resilience, which is associated with a positive personality. All responses are graded on a seven-point scale ranging from one (disagree) to seven (agree). People who scored 130 or lower were regarded to have low resilience, while those who scored 160 or more were thought to have great resilience. Those with scores ranging from 130 to 160 were regarded to have average resilience (Wagnild & Young, 1993).

Chapter Summary

In summary, previous research has found a relationship between self, optimism, and resilience. However, it remains uncertain, and we do not know precisely how self-esteem and optimism predict resilience, because previous papers did not identify what elements cause self-esteem and optimism to enhance or decrease resilience traits. Furthermore, studies on the relationship between self-esteem, optimism, and resilience among university students are limited in Malaysia. The issues described above have caused us tremendous concern. As a

result, the current study aims to investigate the relationship between the variables as well as self-esteem and optimism as predictors of resilience among Malaysian undergraduates.

Chapter 2

Literature Review

Resilience

According to Nor Shafrin Ahmad et al. (2018), resilience is explained as one of the positive psychology elements that unleash one's strength and values through setbacks.

Academics have struggled to define resilience because the term has been utilized in numerous different situations, including organizational, educational, and community settings (Gómez Molinero et al., 2018). Lee et al. (2013) noted that resilience is a dynamic process that changes over time and is influenced by the environment. In this perspective, although many students are more resilient, others may encounter considerably more problems as a result of their life stage challenges, resulting in poor academic performance and, in some circumstances, university withdrawal (Gómez Molinero et al., 2018). It can be said that resilience is the ability of undergraduates to conquer difficulties and suffering, adapt to new changes in daily life with different concepts, maintains a preferred level in the face of events, and perform the performance of conquering pressure and threats in future (Lazarus, 2004).

According to Burger (2019), a resilient person is optimistic, has advanced self-esteem, and perpetuates positive emotions. Based on the social-ecological concept, resilience is the ability to deal with the current culturally relevant resources that assist them face adversity (Ungar, 2014). Jackson et al. (2007) explain that resilience is a protective buffer that protects one against adversity. Habibah Elias et al. (2010) mentioned that resilience among Malaysian students is in a transition phase in their lives, especially first-year students who are far down from home and deal with the challenge of leaving a familiar environment and conforming to new terrain. In an academic setting, resilience refers to students' ability to cope with academic difficulties that become threatening (Martin & Marsh, 2009), and it is positively associated with mental health, the transition from secondary education, and adjustment to

university life (Pidgeon et al., 2014). As a personal quality that enables an individual to thrive in the face of adversity, resilience leads an individual to respond adequately and succeed in a tough situation (Connor & Davidson, 2003; Gilligan, 2007; Jackson et al., 2007).

Self-esteem

High self-esteem leads individuals to feel that they are apt to execute tasks or activities, valiant expressive of different and innovative ideas, in conjunction with maintaining high levels of intrinsic motivation instead of focusing on extrinsic motivation (Thatcher & Brown, 2010; Amabile & Pillemer, 2012).

High self-esteem is a protective factor in mental health and psychological functioning. People with adequate levels of self-esteem can view themselves positively, manifesting themselves as being more confident, self-improving, and able to change the status quo and better cope with varying problems and stressors (Baumeister et al., 2003). Supported by Fernandez-Castillo et al. (2022), the study mentioned that self-esteem acts as an important psychological resource that cushions stress, misadventure, and hassles that accumulate throughout the studies life for university students. It also elevates one's self-regulation and lessens fear and anxiety perception.

Optimism

Optimism is defined as a learned attitude that aids in understanding circumstances and incidents as the greatest possible outcome, regardless of the aspect that is not fully understood (Vaughan, 2020). The individual with optimism value will reveal the extent of one's holding a favorable general outlook for the future. Carver et al. (2010) mentioned that optimism is a cognitive construct that arises from a thinking process but is neither an affective construct nor an emotional construct; hence, a higher level of optimism results in a logical way of viewing and relating the achievement of a favorable future and current efforts. On the contrary, a lower level of optimism results in one tending to avoid effort as they

behold negligible association between effort and a favorable future. Optimism was positively related to subjective well-being during hardship and perplexity, positively related to engagement in coping with obstacles, and negatively related to hindrance avoidance.

Optimism is essential for university students to be resilient when encountering unforeseen incidents. As a cumulative protective factor, along with self-efficacy and emotional self-regulation, optimism guides students to develop coping and problem-solving skills to bounce back from challenging scenarios (Nor Shafrin Ahmad et al., 2018). As Cabras and Mondo (2017) mentioned, optimism is positively associated with strategies for coping with difficulties, planning, and acceptance, while negatively associated with negation, behavioural disentanglement, and mental disentanglement. Hence, it is reasonable to assume that optimism leads students to develop more complex goals and act towards them. Optimism increases a person's ability to tolerate situations and solve problems, which may affect academic achievement (El-Anzi, 2005).

Self-esteem and resilience

According to Olsson et al. (2008), self-esteem refers to one of the personality traits that assist one in personal coping skills development and resources prior to encountering a crisis, hence leading to the individual's resilience. High self-esteem has been identified as a protective factor for resilience, therefore, enhancing the resilience process (Everet et al., 2016), concurrently and vice versa suggesting a possible mutual relationship between both variables (Liu et al, 2021). According to Liu et al (2021), adolescents with high self-esteem are able to utilize the available coping resources and apply them to deal with stress, thereby defending them from probable upshots of stressful life events. It appears that having a feature of resilience serves as a protective factor by elevating good effects, which in turn could increase self-esteem. The assumption that people generally feel better about themselves when their moods are positive is thus supported by empirical data, and it is also suggested that trait

resilience may play a significant role in fostering positive affect and, as a result, higher self-esteem (Benetti & Kambouropoulos, 2006). In contrast, adolescents with low self-esteem are more vulnerable to stress and its negative consequences.

Students with high self-esteem are apt to socialize with their peers and have high levels of efficacy and empathy. On the flip side, students with low self-esteem tend to lack motivation, anxiety and depression, leading to the inability to rebound after torture (Caton, 2020; Valizadeh et al., 2016). The previous study found a positive correlation between the two variables, self-esteem, and resilience, indicating that higher levels of self-esteem are related to higher resilience scores (Fernández-Castillo et al., 2022). This result is consistent with prior research that identified self-esteem as one of the factors that led to resilience (Olsson et al., 2003), as well as the findings of other studies conducted on the university population (Borji et al., 2020).

Additionally, the result of Sneha Mittal et al. (2018) research showed that self-esteem enhances the elevated level of resilience among university students. It explains that the two variables, self-esteem and resilience are interdependent on each other. Signifying that, with high levels of self-esteem, individuals will respond to the demand of the predicament and cope with it, hence, achieving high levels of self-esteem due to the resilience that individuals exhibit in the effective stress coping ability. Studies have shown that self-esteem positively predicts resilience (Karairmak & Cetinkaya, 2011), and was a significant positive correlation between self-esteem and resilience (Harikrishnan & Arif Ali, 2018; Tras et al., 2013). However, another study in Haiti, a Caribbean country, showed no correlation between self-esteem and resilience (Caton, 2020).

Optimism and resilience

Optimism reflects individuals' positive attitudes towards adverse circumstances and adaptation to life and expects favorable outcomes to enhance a great level of resilience development, therefore establishing that optimism is one of the most critical aspects of resilience development (Scheier & Carver, 1985; Yu & Zhang, 2007). The past study by Klohnen (1996) has shown that a resilient person is characterized by optimism, exuberance and energy towards life, proactive, receptivity to new experiences, and positive emotions. The undergraduates with good expectations for the future will face hardship in a more adaptable way, and show a better adaptation to the new stressors of the transition stage related to financial burdens and academic demands etc (Gómez Molinero et al., 2018).

Past studies pointed out that optimism and resilience conjointly in adverse events, which explained that there is an interactive relationship between variables; resilience and optimism influence each other (Souri & Hasanirad, 2011; Segovia et al., 2012). A study conducted in Iran (Sandeep Panchal et al., 2016) providing similar support showed that academic optimism and resilience are significantly and positively correlated in urban Latino high schools (Fallon, 2010). According to Aruna Maheshwari and Varda Jutta (2020), the research found that optimism and resilience formed a strong positive relationship among university students during the Covid-19 pandemic period.

Research conducted in Spain (Gómez Molinero et al., 2018) showed that optimism significantly predicted the level of resilience among university students. Consistent with a study in Australia, Dawson and Pooley (2013) examined that optimism predicted resilience among university students, meaning that higher levels of optimism are prone to a better at dealing with stress and adjusting their transition to university life. Research has shown that optimism is a predictor of resilience among Indonesian students studying in Malaysian universities (Khairina Khairina et al., 2020). Besides, Sabouripour et al. (2021) showed a

significant relationship between optimism and resilience among Iranian students from Universiti Putra Malaysia. As can be seen from the findings, optimistic students are more likely to take possession of their environment and have more confidence in their ability to adapt and overthrow constraints. However, the growing physical and psychological distress that undergraduate students experience, it is nearly difficult not to discuss the negative psychological effects of optimism and resilience.

Self-esteem and optimism

Optimism and self-esteem variables are psychological attributes that positively impact personal well-being (Tan & Tan, 2014), and the studies showed that there is a positive correlation between self-esteem and optimism (Bastianello et al., 2014; El-Anzi, 2005; Mohammad Amin Wani and Aehsan Ahmad Dar, 2017; Reyes et al., 2020). Wenglert and Rosen (2015) hypothesise that self-esteem, optimism, and a positive mood state will enhance the quality of life and experience sensory pleasures. Personal optimism has a positive effect on self-esteem as it promotes a positive attitude in life which improves self-esteem, both variables aid in overcoming the effects of exposure to negative events (Reyes et al., 2020). Optimistic people may focus more on positive information and feedback than negative information that threatens self-esteem (Tetzner & Becker, 2017).

According to Pham and Soltani (2021), building various social networks with new mates in the new environment and integrating into university life were more likely to foster higher self-esteem, optimism, and a sense of belonging. The individual with a high level of self-esteem enhances the likelihood of achievement and lessens failure, hence developing one's optimism level (Mulawarman Mulawarman, 2019). Scheier et al. (1994) stated that self-esteem has an element of self-worth that is inextricably linked to the positive expectations and outcomes in optimism, thus analytically linking self-esteem to optimism.

Theoretical Framework

According to Van Breda (2001), resilience theory is a multifaceted approach, addressed by social workers, psychologists, sociologists, educators, and others, weighing on an individual's strengths. The resilience theory is an educational model designed to support students in exploring the complexities of growth and lifelong development in social work and social support. Toomey et al. (2008) stated that resilience theory underlines a person's strengths instead of its problems and incorporates critical contextual factors into the structure, providing a practical perspective on human development through optimism and hope. As students, they should acknowledge the components associated with positive outcomes in order to be adequately prepared to meet their needs effectively. The ability to reassess situations that initially seemed hostile will be enhanced to allow the individual to approach hardship as obstacles and to seek opportunities in adversity (Southwick & Charney, 2012). Moreover, Fernández-Castillo et al. (2022) findings are optimistic for the university population pursuing degrees in education since they demonstrate that many participants scored well on measures of resilience and self-esteem, two factors that are crucial for academic achievement and future professional success. Gómez- Molinero et al. (2018) claims that the findings showed that among university students, optimism strongly predicted levels of resilience. This implies that pupils who have high ambitions for their future may respond to hardship more adaptably. Additionally, optimistic college students will also demonstrate a stronger ability to adapt to the additional stressors they will experience during this transition stage, such as financial pressure and academic demands.

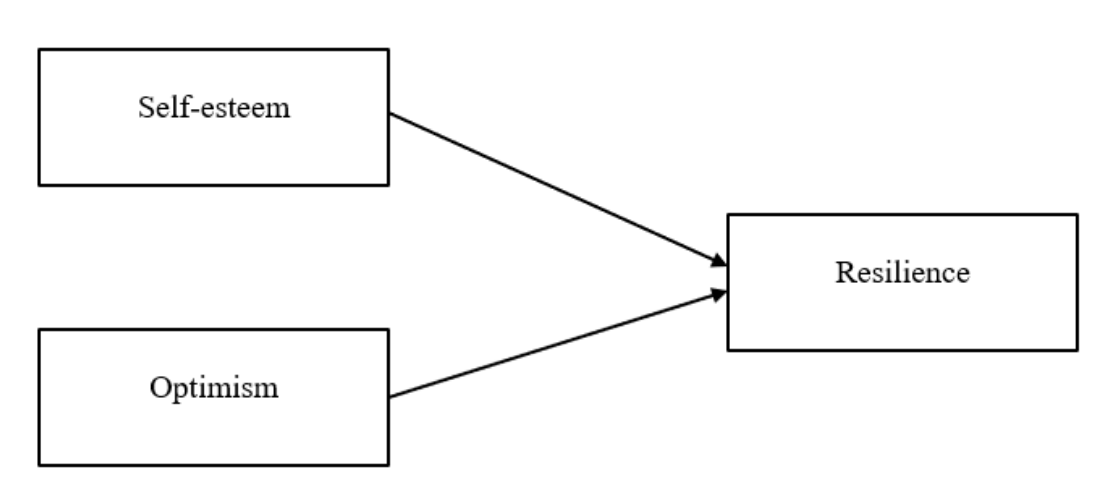
Conceptual Framework

Figure 1. Conceptual framework of the present study

The conceptual framework model is proposed and illustrated for the relationship between self-esteem, optimism, and resilience in undergraduate students in Malaysia, as shown in figure 1. In the framework, self-esteem and optimism are the predictor variables, while resilience is the outcome variable. It has been explained that the higher the self-esteem and optimism, the greater the resilience of Malaysian undergraduate students. Besides, the correlation between variables self-esteem, optimism, and resilience among undergraduate students in Malaysia will be examined throughout this study.

Chapter 3

Methodology

Research Design

Quantitative research was applied to the current study, which used predictors to identify the relationship between self-esteem, optimism, and resilience among undergraduates in Malaysia. A cross-sectional studies study data from a population at a single point through observation. Cross-sectional studies do not maintain longitudinal relationships with participants like other kinds of observational research (Wang & Cheng, 2020). In a cross-sectional study, the researcher simultaneously assesses the participants' exposures and outcomes (Setia, 2016). The relationship between the variables and subjected study participants was measured as a outcome of this study in a rapid and low-cost manner. The quantitative design was used in this study to analyze phenomena or events that impact people and develop knowledge and insight into the social world.

Sampling Method

The convenience sampling technique was employed as the sampling strategy for this study. Researchers can glean a wealth of information from collected data via purposeful sampling. This made it possible for researchers to explain how broadly their findings have implications for society (Edgar & Manz, 2017). In population research, convenience sampling was frequently used, especially in prehospital and disaster studies (Stratton, 2021). Convenience sampling in this instance allowed researchers to swiftly and efficiently extract more information from the sample. The inclusion criteria of the study were listed below: (a) participant must be a full-time undergraduate student; (b) aged between 19 to 25 years old; (c) studying in university in Malaysia. To help researchers filter the irrelevant data, the exclusion criteria were applied in the study, which listed below: (a) non full-time

undergraduate student; (b) not aged between 19 to 25 years old; (c) not studying in university in Malaysia.

Sample Size

In the study, G-Power version 3.1.9.7 was used to calculate the sample size of the present research study. The square of Pearson's correlation coefficient for the predictive variable self-esteem was 0.089, while for the predictive variable optimism was 0.464. To evaluate the sample size, effect size, $f^2=.277$ was applied in the formula, with statistical power level of .95 and error probability level of 0.05. Based on the G-Power calculation, the sample size for this research study is 59 (refer to Appendix A, page 61), which was the number of used data required for the study. However, 200 participants were initially estimated to be recruited as raw data for the present research study to get more accurate results and minimize missing data during the questionnaire collection and data calculation.

Research Location

The participants will be recruited from both public universities and private universities in Malaysia. The research participants in the present study will be mainly recruited from University Tunku Abdul Rahman (UTAR) Kampar Campus, which is in Perak and is a huge university with more than 15,000 undergraduate students. The undergraduates from other universities such as Universiti Teknologi PETRONAS, Universiti Sains Malaysia, Sunway University, etc. will be recruited via online survey group and friend referral.

Research Participants

In the present study, a total of 153 participants were recruited during data collection. Notwithstanding, according to the sample size calculation, only 59 participants remained for the current study analysis. Based on Table 3.1, 19 males (32.2%) and 40 females (67.8%) between the ages of 19 to 24 ($M = 21.220$, $SD = 1.427$) were retained as used data for the actual study. As for the ethnicity of the participants, Chinese made up the majority ($n = 48$,

81.4%), with Malay ($n= 4$, 6.8%), Indian ($n= 3$, 5.1%), and other races ($n= 4$, 6.8%) such African, Dusun, Rungus and Sino Dusun, etc. All the undergraduate students recruited for the present study were from different universities in Malaysia. Majority of the respondents were from University Tunku Abdul Rahman ($n=17$, 28.8%), followed by Universiti Sains Malaysia ($n=9$, 15.3%), University Tun Hussein Onn Malaysia ($n=5$, 8.5%), Taylor's University ($n= 4$, 6.8%), Universiti Teknologi PETRONAS ($n= 3$, 5.1%). Besides, INTI International College, SEGI college, Tunku Abdul Rahman University of Management and Technology, UCSI university, Universiti Kebangsaan Malaysia, Universiti Malaya, Universiti Malaysia Sarawak, and UOW Malaysia KDU University College were shared the same number respectively, namely 2 from each university (3.4%). Meanwhile, Universiti Malaysia Pahang, Universiti Putra Malaysia, Universiti Teknologi MARA, Universiti Teknikal Malaysia Melaka, and University of Technology Malaysia were shared the same number respectively, namely 1 from each university (1.7%).

Table 3.1

Demographic Information of Respondent (n=59)

	<i>n</i>	<i>%</i>	<i>M</i>	<i>SD</i>	Min	Max
Age			21.22	1.42	19	24
			0	7		
Gender						
Male	19	32.2				
Female	40	67.8				
Ethnicity						
Malay	4	6.8				
Chinese	48	81.4				
Indian	3	5.1				

Others	4	6.8
University		
University Tunku Abdul Rahman (UTAR)	17	28.8
Universiti Sains Malaysia	9	15.3
University Tun Hussein Onn Malaysia	5	8.5
Taylor's University	4	6.8
Universiti Teknologi PETRONAS	3	5.1
INTI International College	2	3.4
SEGi college	2	3.4
Tunku Abdul Rahman University of Management and Technology (TAR UMT)	2	3.4
UCSI university	2	3.4
Universiti Kebangsaan Malaysia	2	3.4
Universiti Malaya	2	3.4
UOW Malaysia KDU University College	2	3.4
Universiti Malaysia Sarawak (UNIMAS)	2	3.4
Universiti Malaysia Pahang	1	1.7
Universiti Putra Malaysia	1	1.7
Universiti Teknologi MARA (UiTM)	1	1.7
Universiti Teknikal Malaysia Melaka (UTeM)	1	1.7
University of Technology Malaysia (UTM)	1	1.7

Ethical Clearance Approval

To fortify the ethics of the present study, a set of questionnaire was submitted to UTAR Scientific and Ethical Review Committee (SERC) to apply for ethical approval of the project research purposes. Thereafter, an Ethical Approval Letter with the reference number U/SERC/220/2022 was reviewed and provided by SERC before data collection (see Appendix B, page 64).

Pilot Study

A pilot study was conducted after obtaining ethical approval from SERC. It is pivotal to carry out a pilot study to intensify the effectiveness and quality of the main study. Besides, the pilot test was carried out for the purpose of randomization and blinding process reviewing, recruiting potentials evaluation, researcher experience dilating related to the study methodologies, and sample size computation estimation (In, 2017). In accordance with Browne (1995), claims that over 30 samples were proposed for each group for pilot study. Yet on the other hand Julious (2005) states that 12 samples were advocated. For the current study, 20 qualified participants who met the inclusion criteria were chosen for pilot study data analysis. Utilizing Qualtrics, an online survey for the pilot study was developed and distributed online via social media (i.e., Facebook and WhatsApp).

Instrumentation

Rosenberg Self-Esteem Scale (RSES)

The self-esteem measurement tool most frequently used is the Rosenberg Self-Esteem Scale developed by Rosenberg (1965). It has been used in numerous sectors and has shown comparable stability across many countries (Park & Park, 2019). The RSES is a brief, simple-to-use Likert-scale test with 10 items, while items 2, 5, 6, 8, and 9 are reversed items. The questionnaire using a 4-point Likert scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). The total score ranges from 10 to 40, and the higher the number, the more self-esteem

there is (Tinakon & Nahathai, 2012). Akhter and Ferdous (2019) study calculated the Cronbach's alpha to determine the internal consistency of RSES where the outcome revealed that alpha of .86. According to table 3.2, the result shows that the Cronbach's alpha of the pilot study was .826 and actual study was .837.

Revised Life Orientation Test (LOTR)

Michael Scheier and Charles Carver first developed the Life Orientation Test (LOT) in 1985, and it was then published in Health Psychology. As several research implied a two-correlated component model reflecting optimism and pessimism, LOTR results generally looked bi-dimensional. An appropriate description of the data requires correlated mistakes between positively phrased items, according to attempts at correlating one-factor models (Vautier, 2003). The 10-item LOT-R includes three items that assess optimism and are worded positively such as "I'm always optimistic about my future", three reversed-scored items (items 3, 7, and 9) that measure pessimism and are worded negatively which include "If something can go wrong for me, it will.", and four filler items (items 2, 5, 6, and 8) that conceal the test's purpose. Participants indicate their level of agreement on a 5-point Likert scale, ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). Cronbach's alpha was .78, and the test's reliability was assessed using a test-retest (.68 to .79) method (Wani & Dar, 2017). Table 3.2 indicates the Cronbach's alpha value of the pilot study was .626 and actual study was .624.

Brief Resilience Scale (BRS)

The self-perceived capacity to recover fast from stress is measured using the Brief Resilience Scale (BRS), which is a viable and reliable tool (Jacobs & Horsch, 2019). There are six items for the brief resilience scale (BRS), while items 2, 4, and 6 are reversed items. The BRS is scored by determining the mean of the six elements and reverse coding items 2, 4, and 6. Each of the six items had to be answered on a 5-point Likert scale ranging from 1

(*strongly disagree*) to 5 (*strongly agree*). The overall score may range from 6 to 30. A participant with a higher mean score on the Brief Resilience Scale is considered resilient (Kyriazos et al., 2018). Rodríguez-Rey et al. (2016) reported that BRS has a Cronbach's alpha of .93. The validity of each item ranges from .82 to .91 (Amat et al., 2014). According to table 3.2, it shows that Cronbach's alpha value of the pilot study was .784 and the actual study was .482.

Table 3.2

Reliability of Instruments in Pilot Study (n=20) and in Actual Study (n=59)

	No. of items	Cronbach's alpha, α	
		Pilot Study	Actual Study
Rosenberg Self-esteem Scale (RSES)	10	.826	.837
Revised Life Orientation Test (LOT-R)	10	.626	.624
Brief Resilience Scale (BRS)	6	.784	.482

Procedures

In current study, a pilot study was carried out to assess the validity of the instruments applied in the Malaysian setting. The target participants for the study were undergraduate students aged 19 to 25, who were currently enrolled as full-time students at private universities and public universities in Malaysia. Participants may yield information relevant to the study of the correlation between self-esteem and optimism as predictors of resilience among undergraduate students which were considered by the growing physical and psychological distress that undergraduate students exposed to. In other words, those who did not fulfill the criteria, such as non-Malaysian University undergraduate students or undergraduate students below age 19 and above 25, will be rolled out from the study.

The online questionnaire was generated via Qualtrics with the language of English. Once exported, the questionnaire was distributed to undergraduate students currently pursuing study in Malaysian universities for data collection purposes. Data collecting will be done via friend referral, and sharing on online platforms such as Facebook, Microsoft Teams, E-mail, Whatsapp and approached the students from lecture classes and the library. Participants were encouraged to complete the questionnaire within 10-15 minutes. An informed consent form was built in with the questionnaire to ensure that students participated voluntarily and without worrying about the negative consequences. To ensure the rights of the participants are protected, each participant was required to complete the consent form before answering the questionnaire. Participants who accepted the terms and conditions and choose to participate in the study would be asked and obliged to click on the “I agree to participate” option. As a result, they were required to complete an online questionnaire. The contact information of researchers was included for participants contact purpose if any inquiries are made via email.

There was a total of 4 sections for the questionnaire (refer to Appendix C, page 66), comprised informed consent, Part A (Rosenberg Self-Esteem Scale), Part B (Revised Life Orientation Test), Part C (Brief Resilience Scale), and Part D (Demographic question). To prevent fraudulent data, attention check questions were included in the questionnaire. IBM SPSS statistical version 23.0 was used to evaluate, convert, and create a distinctive pattern between many data variables after data collection and filtering was done. Multiple Linear Regression was applied for relationship determination between a dependent variable and multiple independent variables.

Chapter 4

Result

Normality

The assumption of normality was tested by five normality indicators in the study. Skewness, kurtosis, and Kolmogorov-Smirnov Test as numerical display, while histogram and P-P plot as visual display.

Skewness and Kurtosis

The result of skewness and kurtosis of the three variables of self-esteem, optimism, and resilience were displayed in Table 4.1 below. Leptokurtic kurtosis was found in the variable of self-esteem, while Platykurtic kurtosis was found in the variables of optimism and resilience. Since both skewness and kurtosis values among three variables are within the acceptable range of ± 2 , there is no violation of the skewness and kurtosis indicators among three variables (George & Mallery, 2010), which means that data was normally distributed.

Table 4.1

Skewness and Kurtosis of Variables

	Skewness	Kurtosis
Self-esteem	-.014	.504
Optimism	-.018	-.447
Resilience	-.262	-.237

Histogram

The histogram of self-esteem, optimism, and resilience shows a bell-shaped curve (see Figures 4.1, 4.2, and 4.3 - [refer to Appendix E, page 76]), suggesting that the variables were normally distributed.

P-P Plot

The P-P plot was used to test the normality of the variables used in present study. The result of P-P plot performed in Figure 4.4, 4.5, and 4.6 (refer to Appendix E, page 78) read that the observed values were less deviated from the diagonal line of the expected value for variables of self-esteem, optimism, and resilience. Therefore, three variables used in present study showed no violation against the normality indicator of P-P plot.

Kolmogorov-Smirnov Test

The test of normality of the variables of self-esteem, optimism, and resilience was performed in Table 4.2 below. Based on the result, the value of Kolmogorov-Smirnov Test for variables of self-esteem and resilience showed larger than .05, which indicating that the sample distribution was not significantly different from normal distribution. However, there was a significantly different from a normal distribution for optimism shown as its Kolmogorov-Smirnov Test value was smaller than .05. Therefore, the variable of optimism was violated towards normality indicator of Kolmogorov-Smirnov Test.

Table 4.2***Kolmogorov-Smirnov (K-S) Test for Variables***

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Self-esteem	.087	59	.200*	.986	59	.742
Optimism	.132	59	.013	.971	59	.165
Resilience	.087	59	.200*	.974	59	.232

Note. *. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Conclusion for Assumption of Normality

To conclude the assumption of normality, the variables of self-esteem and resilience showed no violation toward skewness, kurtosis, Kolmogorov-Smirnov Test, P-P plot, and histogram. Although the assumption for the Kolmogorov-Smirnov Test was not met for variable of optimism, but the other normality testing (i.e. skewness, kurtosis, P-P plot, and histogram) showed no violation. Since the skewness and kurtosis values of the variable of optimism were within the acceptable range of ± 2 , slight violations of Kolmogorov-Smirnov Test were acceptable; that being the case, the variable was considered no violation toward the normality. Hence, it can be concluded that three variables used in the present study were normally distributed.

Descriptive Statistics

The descriptive statistics of three variables used in the present study are displayed in Table 4.3. In the present study, the mean and standard deviation of the predictor variables were self-esteem ($M=27.695$; $SD=4.576$) and optimism ($M=14.034$; $SD=3.034$). Meanwhile, the mean and standard deviation for outcome variable were resilience ($M=18.542$; $SD=2.909$).

Pearson Correlation was applied to assess the correlation among the variables stated in present study. Based on Table 4.3, the results of Pearson Correlation showed that there were a positively and statistically highly significant relationship between self-esteem and resilience with the value $r(59)=.535$, $p<.001$; self-esteem and optimism with the value $r(59)=.532$, $p<.001$; as well as optimism and resilience with the value $r(59)=.619$, $p<.001$.

Table 4.3*Descriptive Statistics and Pearson Correlation of self-esteem, optimism, and resilience*

Variable	M	SD	1	2	3
1. Self-esteem	27.695	4.576	-	.532**	.535**
2. Optimism	14.034	3.034		-	.619**
3. Resilience	18.542	2.909			-

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

Multiple Linear Regression (MLR)

Multiple linear regression (MLR) was used to assess the overall model fit and test the individual contribution of individual independent variables on the dependent variable. The study tested the five assumptions of MLR, namely multicollinearity, independence of errors, normality of residual, linearity of residual, and homoscedasticity.

Multivariate outliers

Table 4.4 below shows that cases 4, 17, and 48 as potential outliers in the sample size of 59 in the present study. The multivariate outliers test was conducted to determine the values of Mahalanobis distance, Cook's distance, and Centered leverage value for the three cases (refer to Table 4.5). There was no violation showed in Mahalanobis distance as the values of three cases were smaller than the cutoff point, 15 (Barnett & Lewis, 1978). Besides, there was no violation in Cook's distance as the values of three cases were smaller than 1 (Cook & Weisberg, 1982). To calculate leverage value for the present study, a formula of $\frac{(p+1)}{n}$ was applied, which was $\frac{(2+1)}{59} = .051$. According to Hoaglin and Welsch (1978), the leverage value of the sample was suggested to multiplied by two for cases testing, which was .102 after calculation. The leverage value of three cases was smaller than .102, suggesting no

violation of Centered leverage value, indicated the cases had no influence towards prediction (Field, 2018). Since three cases of potential outlier (i.e. 4, 17, 48) did not shown any violation in the outlier measures conducted, it can be concluded that they were not influential cases, hence neither of these three cases would be removed from the used data with 59 sample size.

Table 4.4*Casewise Diagnostics for the Resilience*

Casewise Diagnostics^a				
Case Number	Std. Residual	Resilience	Predicted Value	Residual
4	-2.228	15	19.93	-4.925
17	-2.285	13	18.05	-5.052
48	-2.484	12	17.49	-5.491

Note. a. Dependent Variable: Resilience

Table 4.5*Multivariate Outliers Test*

		Mahalanobis	Centered Leverage	
	Case Number	Distance	Cook's Distance	Value
1	4	1.24284	.06865	.02143
2	17	1.48258	.08069	.02556
3	48	2.14055	.12370	.03691
Total	N	3	3	3

Multicollinearity

Table 4.6 presented that the tolerance values of the two independent variables (i.e. self-esteem and optimism) were .717 and .717 respectively, which larger than .10 of the cutoff threshold, and the Variance Inflation Factor (VIF) values were 1.395 and 1.395 respectively, which were smaller than 10 of the cutoff threshold. According to Shieh (2010), since the tolerance value was larger than .10 and VIF value was smaller than 10 for variables of self-esteem and optimism, therefore, the assumptions showed no violation.

Table 4.6*Tolerance and VIF values*

	Collinearity Statistics	
	Tolerance	VIF
Self-esteem	.717	1.395
Optimism	.717	1.395

Note. a. Dependent Variable: Resilience

Independence of Errors

The independence of errors in present study was tested by Durbin-Watson. Table 4.7 showed the value of Durbin-Watson with 2.331, which was within the range of one to three and closer to two, which indicated it was congruent to the assumption (Durbin & Watson, 1971). Therefore, it showed the assumption of independence of errors was not violated.

Table 4.7*Durbin-Watson from Model Summary of the Predictors*

Model	Durbin-Watson
1	2.331

Homoscedasticity, Normality of Residual and Linearity of Residual

The visual display of residual scatterplot of Figure 4.7 was provided for the assumptions for linearity, residual normality, and homoscedasticity analysis purpose (Appendix G, page 84). The result of the scatterplot showed no violation as the residuals are randomly and evenly scattered around the zero line, which met the assumption for linearity, residual normality, and homoscedasticity.

Multiple Linear Regression Analysis

Multiple linear regression analysis was conducted in the present study with the purpose of evaluate the contribution of self-esteem and optimism toward resilience among undergraduate students in Malaysia. The model of the present study showed statistically significant, $F(2,56) = 21.189, p < .001$ and accounted for 42.2% of variance. The present study was discovered that self-esteem ($\beta = .286, p = .018$) and optimism ($\beta = .467, p = .001$) were positively and significantly predicted resilience among undergraduate in Malaysia (refer to Appendix G, page 83).

Chapter 5

Discussion and Conclusion

Discussion of Findings

The present study adopted the resilience theory to examine (1) the relationship between self-esteem and resilience among undergraduates in Malaysia (2) the relationship between self-esteem and optimism among undergraduates in Malaysia (3) the relationship between optimism and resilience among undergraduates in Malaysia (4) self-esteem positively predicts resilience among undergraduates in Malaysia (5) optimism positively predicts resilience among undergraduates in Malaysia.

The findings revealed a positive and statistically high significant relationship between self-esteem and resilience among undergraduates in Malaysia. As mentioned in the Literature Review, past studies have stated that there was a significant positive correlation between self-esteem and resilience (Harikrishnan & Arif Ali, 2018; Tras et al., 2013).

In other words, individuals with high resilience have high self-esteem (Kapikiran & Acun - Kapikiran, 2016). Mittal et al. (2018) found that self-esteem and resilience are supporting variables. Individuals with high self-esteem are more likely to strive and bounce back through difficult times to maintain their high level of self-esteem. High self-esteem causes a person to act by the situation and cope with the unpleasant condition using whatever coping resources are accessible to them. In contrast, if a person is inherently resilient, they will have high self-esteem due to their efficient coping abilities with stress.

Besides that, a study reported that non-professional students have poor self-esteem because they are less focused on their goals, do not participate in career-related activities, have low family support, and more pessimistic (Shaheen, 2015). However, since the findings from this study and in various contexts have generated the same conclusion, this might

further objectively establish that there is a relationship between self-esteem and resilience among undergraduates.

The present result revealed that self-esteem has a significant relationship with optimism among undergraduates in Malaysia. The findings are consistent with past studies, stating that self-esteem positively predicted optimism (Bastianello et al., 2014; El-Anzi, 2005; Mohammad Amin Wani and Aehsan Ahmad Dar, 2017; Reyes et al., 2020).

It is believed that optimistic people have higher self-esteem because optimism symbolizes a person's positive outlook on the future. Good future expectations have a positive effect on self-esteem (Kapikiran & Acun-Kapikiran, 2016). Furthermore, past research suggests that optimism has a good effect on behavioural coping and the formation of emotional experiences, indicating that optimistic students have high levels of self-esteem (Checa-Domene et al., 2022). Next, the relationship between self-esteem and optimism can also be explained by life satisfaction among undergraduate students. This is because students that are optimistic and have strong self-esteem report a high level of life satisfaction (Agberotimi & Oduaran, 2020).

Wilkins et al. (2014) found that students who believed that things would "go their way" and that they could attain their future goals had higher overall satisfaction. Individuals may believe they are advancing toward important life objectives because their overall judgment of their quality of life is based on their own set of criteria.

The third hypothesis is also supported based on the findings. This is consistent with the past studies which stated that there was a significant relationship between optimism and resilience among undergraduates (Sandeep Panchal et al., 2016; Segovia et al., 2012; Sabouripour et al., 2021; Gómez Molinero et al., 2018).

In unfavourable settings, it appears that optimism and resilience coexist. In fact, there is an interactive relationship between optimism and resilience (Sabouripour & Roslan, 2015).

Students can gain a better understanding of what influences their positive attitudes and what variables influence them. They will strengthen their resilience and ability to handle hardship and challenges indirectly. Gómez Molinero et al. (2018) noted that research findings have indicated that optimism significantly predicted resilience levels among university students. In addition, students who have high expectations for their future will cope better with difficulties. Furthermore, optimistic undergraduates will adjust better to the additional stressors they will face during this transition stage, such as economic hardship and academic responsibilities.

According to the findings of a study, optimism functions as a predictor of resilience and lowers psychological distress caused by life transitions. Optimism variable shows the positive attitude of Indonesian postgraduate students when confronted with tough events, implying that optimism is an important part of resilience growth (Khairina Khairina et al., 2020). Thus, optimism significantly predicted the level of resilience among university students.

The results support the fourth hypothesis of the present study. It indicates a high level of self-esteem resulting in high level of resilience, which was consistent with the past studies (Fernández-Castillo et al., 2022; Borji et al., 2020). Liu et al. (2014) found that self-esteem can positively impact the growth of resilience. This implies that self-esteem can assist students in developing their resilience and ability, which will contribute to a positive future orientation and also lead to the formation of a higher level of professional aspiration (Khampirat, 2020).

This is supported by a previous study conducted among Turkish university students, which showed a positive correlation between resilience and self-esteem (Tras et al., 2013). This is congruent with the self-esteem hypothesis proposed by Grotberg (Utami, 2017). According to the theory, the source of resilience that comes from within a person is known as

the source I am in which there is self-esteem. This resource consists of attitudes, self-confidence, and feelings and is characterized by people who are self-confident, respectful, and capable of taking responsibility. Someone's resilience can increase if they have inner strength, consequently self-esteem is one of the factors that may affect resilience.

Lastly, the findings of the current study support the fifth hypothesis. In other words, a high level of optimism will lead to a high level of resilience among university students. It is similar to the past findings such as (Sabouripour et al., 2021; Dawson & Pooley, 2013). As a reference to past studies, university students who demonstrated high levels of resilience also demonstrated significant levels of optimism (Zaheer & Khan, 2022).

A study found that the optimistic factor of resilience highlighted a positive attitude in challenging situations (Hou et al., 2020). As a result, college students who were optimistic were more likely to employ valid coping methods to regulate mood in stressful settings such as home isolation, online learning, and academic problems (Alessandri et al., 2020). Besides that, Zhang et al. (2021) noted that tenacity provided a strong sense of power and perseverance in the face of failures. It described a person who maintained control in the face of adversity. Meanwhile, strength primarily reflected a person's ability to recover from adversity. Thus, optimism should be considered while developing prevention and intervention strategies to increase individual resilience.

Theoretical Implication

The resilience theory is applied in the current study to find out the predictive role of self-esteem and optimism on resilience. To this extent, the results supported the theory, in which all predictors, including self-esteem and optimism among undergraduates in Malaysia have significantly predict resilience. Since the findings of this study validated the hypothesis, it can also be applied to the Malaysian context. Due to the lack of research on these predictors of resilience among Malaysian undergraduates, this study may serve as a foundation and

provide insight for future researchers to alter and improve the application of the resilience theory. Therefore, when a related issue is being studied in the future, this theory can be used. The results also gave future researchers hints for investigating the relationship between these variables with resilience theory.

Practical Implication

The results of the current study indicated the importance of self-esteem and optimism in influencing undergraduate's resilience in Malaysia. There is not much research that has looked at the relationship between self-esteem and optimism with resilience among Malaysian degree students. As a result, the current study improved existing research in the Malaysian setting. An intervention for increasing resiliency can be established. Malaysian therapists and counsellors could design interventions that boost participants' resiliency while also instilling self-esteem and optimism. The Malaysian Psychological Association (PSIMA) might take some proactive steps to train therapists and counsellors, open additional counselling centres, and treat students with poor self-esteem and optimism. This study may assist counsellors and psychologists in seeing resilience correlations in a broad perspective.

The Malaysian Ministry of Education should be aware of this issue and prevent undergraduate students from developing low levels of resilience. Cooperation between the government and educational institutions can be used to develop early education programmes and campaigns. By participating in the programs and initiatives, students can learn about the importance of resilience and how to boost their self-esteem and optimism. As a result, since students are future leaders of the country, they may be better able to contribute.

Limitations

Several limitations were unearthed in the current study that must be addressed clearly. Firstly, the convenience sampling method, which is a non-probability method, was conducted to find participants which cause sampling bias. Instead of representing the Malaysian

undergraduate population, it represents a very limited composition of Malaysians. Since Malaysia is a multicultural nation, the findings may not accurately reflect the Malaysian demographic. However, Chinese students 81.4% made up most respondents in the present study. This does not realistically depict the amount of the Malaysian citizenry population because, in view of the fact that statistics reported by the Department of Statistics Malaysia (2022), Malaysia's demographic consists of Malay population with 69.9%, followed by Chinese composition at 22.8%, Indian representing 6.6%, and the other population at 0.7% in the year 2022.

Besides, another limitation discovered in the present study is the small sample size. There were just 59 students of the sample size being filtered and took part in the study. As this study included all Malaysian undergraduates, the sample size may not be sufficient to reflect the full population. The statistical power may be lower, impacting the actual effect of statistical analysis. The application of sample size calculation has a direct impact on research outcomes. Small sample sizes undermine a study's internal and external validity (Faber & Fonseca, 2014).

The third limitation is that the self-administered online questionnaire may result in participant response bias. As self-esteem, optimism, and resilience are important aspects of a student's life, they may have revised their responses based on how they want to be seen through the survey in order to provide a positive feeling of themselves in the study. Controlling social desirability bias can affect the set of demographic factors which is perceived as statistically relevant and have a considerable impact on coefficient sizes (Larson, 2019). There might be a risk that the data will be unreliable and inaccurate due to this bias.

Recommendation

Elfil and Negida (2017) found that probability sampling methods provide individuals in the target population with an identical chance of being chosen as a participant in the study. Moreover, the randomization principle is used to select a sample. To overcome the first limitation, probability sampling methods such as stratified random sampling are recommended in order to obtain samples with equal demographic backgrounds that best represent the population. As a result of adopting probability sampling methods, the selected samples are more representative and generalize the target population.

Furthermore, in order to overcome the limitation of small sample size, future researchers are encouraged to recruit more respondents by rewarding them. For example, coupons can be given as a motivator for their participation and engagement.

Finally, researchers can change the survey questions by leaving out the neutral option. Furthermore, utilizing a social desirability scale can help to eliminate social desirability bias (Pontes et al., 2014). Hiding the goal of surveys can assist in the reduction of social desirability bias. Besides that, quantitative survey aids future studies which can employ qualitative research methodologies to analyze participants' thoughts in depth.

Conclusion

In conclusion, the current study supported (1) the first hypothesis, whereby there is a significant relationship between self-esteem and resilience among undergraduates in Malaysia. In addition, (2) the second hypothesis is supported by the present study in which there is a significant relationship between self-esteem and optimism among undergraduates in Malaysia, and (3) the third hypothesis was found to have a significant relationship between optimism and resilience among undergraduates in Malaysia. Therefore, this study has indicated the understanding that (4) self-esteem and (5) optimism are determinants of resilience which are pivotal aspects of emotional well-being that is necessary for

undergraduates to enhance their academic advancement. As a result, this study has produced a deeper knowledge of the determinants of resilience, which may be useful in further investigating the underlying aspects of self-esteem and optimism. The current study can serve as a reference for future researchers who seek to develop the resilience theory to further analyze the behaviour of resiliency among students in a multicultural and collectivism society like Malaysia.

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Appendices

Appendix A: G-power Calculation

1. Self-esteem

Harikrishnan, U., & Arif Ali. (2018). Resilience, psychological distress, and self-esteem among undergraduate students in Kollam district, Kerala. *Journal of Social Work Education and Practice* 3(4), 27-36. https://www.jswep.in/uploads/3/1/7/2/31729069/030404_resilience_psychological_distress_and_self-esteem_among_undergraduate_students.pdf

Table 3: Correlation between resilience, self-esteem, DASS score

	Resilience	Depression	Anxiety	Stress
Self esteem	.286**	-.186**	-.237**	-.199**
Resilience	-	-.124*	-.117*	-.102

*p≤0.05, **p≤0.01

$$f^2 = \frac{r^2}{1 - r^2}$$

$$= \frac{(0.286)^2}{1 - (0.286)^2}$$

$$= 0.089$$

2. Optimism

Maheshwari, A., & Jutta, V. (2020). Study of relationship between optimism and resilience in the times of COVID- 19 among university students. *The International Journal of Indian Psychology*, 8(3). <https://doi.org/10.25215/0803.157>

Table: 4 Correlation between two variables

Variables	N	r	p
Optimism- Resilience	100	0.563	<0.01
Optimism(M)- Resilience(M)	36	0.587	<0.01
Optimism(F)- Resilience(F)	64	0.539	<0.01

$$f^2 = \frac{r^2}{1 - r^2}$$

$$= \frac{(0.563)^2}{1 - (0.563)^2}$$

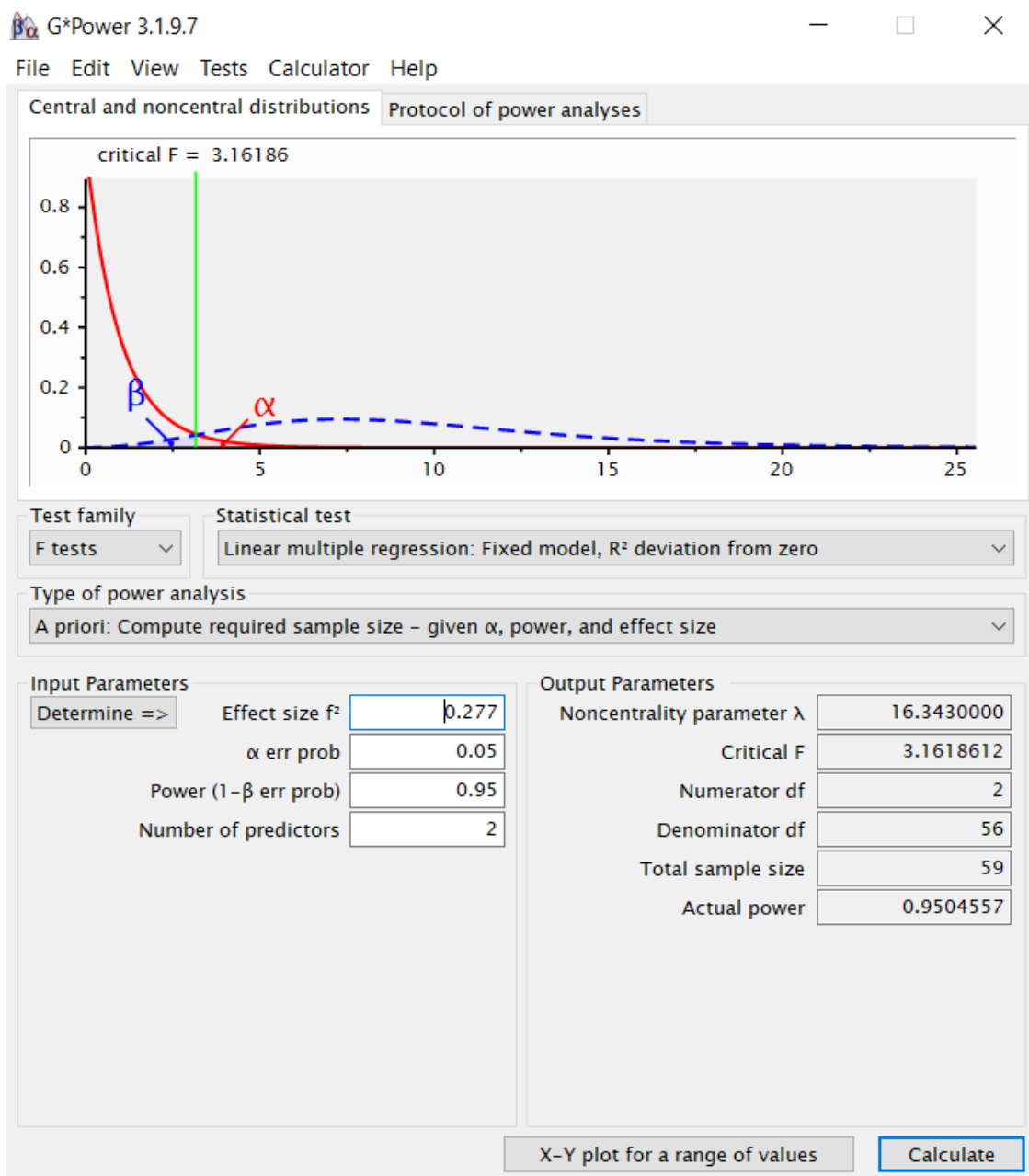
$$= 0.464$$

3. Average f² Calculation

$$\text{Average } f^2 = \frac{0.089 + 0.464}{2}$$

$$= 0.277$$

4. G-power Calculation



Sample size=59

Appendix B: Ethical Approval



UNIVERSITI TUNKU ABDUL RAHMAN DU012(A)
Wholly owned by UTAR Education Foundation Co. No. 578227-M

Re: U/SERC/220/2022

3 November 2022

Dr Pung Pit Wan
Head, Department of Psychology and Counselling
Faculty of Arts and Social Science
Universiti Tunku Abdul Rahman
Jalan Universiti, Bandar Baru Barat
31900 Kampar, Perak.

Dear Dr Pung,

Ethical Approval For Research Project/Protocol

We refer to the application for ethical approval for your students' research project from Bachelor of Social Science (Hons) Psychology programme enrolled in course UAPZ3023. We are pleased to inform you that the application has been approved under Expedited Review.

The details of the research projects are as follows:

No	Research Title	Student's Name	Supervisor's Name	Approval Validity
1.	The Relationship Between Self-esteem, Optimism, and Resilience Among Undergraduates in Malaysia	1. Beh Jin Xuan 2. Archanaa a/p Muthiah 3. Kayathri a/p Krishnamurthi	Dr Tan Chee Seng	3 November 2022 – 2 November 2023
2.	The Relationship Between Stress Level, Fear and Life Satisfaction Among Undergraduate Students in Malaysia During COVID-19 Pandemic	1. Dashwan Gobind Singh a/l Kulwant Singh 2. Pung Hai Thing 3. Puvaneswary a/p Vigneswaran	Ms Teoh Xi Yao	
3.	Self-control and Resilience on Academic Performance Among Undergraduate Students in Malaysia	1. Chan Weng Hoe 2. Neo Eyone 3. Thayanhithy a/l Veeramany		

The conduct of this research is subject to the following:

- (1) The participants' informed consent be obtained prior to the commencement of the research;
- (2) Confidentiality of participants' personal data must be maintained; and
- (3) Compliance with procedures set out in related policies of UTAR such as the UTAR Research Ethics and Code of Conduct, Code of Practice for Research Involving Humans and other related policies/guidelines.
- (4) Written consent be obtained from the institution(s)/company(ies) in which the physical or/and online survey will be carried out, prior to the commencement of the research.

Kampar Campus : Jalan Universiti, Bandar Barat, 31900 Kampar, Perak Darul Ridzuan, Malaysia
Tel: (605) 468 8888 Fax: (605) 466 1313
Sungai Long Campus : Jalan Sungai Long, Bandar Sungai Long, Cheras, 43000 Kajang, Selangor Darul Ehsan, Malaysia
Tel: (603) 9086 0288 Fax: (603) 9019 8868
Website: www.utar.edu.my



Should the students collect personal data of participants in their studies, please have the participants sign the attached Personal Data Protection Statement for records.

Thank you.

Yours sincerely,



Professor Ts Dr Faiz bin Abd Rahman
Chairman
UTAR Scientific and Ethical Review Committee

c.c Dean, Faculty of Arts and Social Science
 Director, Institute of Postgraduate Studies and Research



Appendix C: Questionnaire

11/22/22, 4:41 AM

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DU012(A)

Personal Data Protection Statement

Personal Data Protection Statement

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

Notice:

1. *The purposes for which your personal data may be used are inclusive but not limited to:-*
 - *For assessment of any application to UTAR*
 - *For processing any benefits and services*
 - *For communication purposes*
 - *For advertorial and news*
 - *For general administration and record purposes*
 - *For enhancing the value of education*
 - *For educational and related purposes consequential to UTAR*
 - *For the purpose of our corporate governance*
 - *For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/ study loan*

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

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shared when required by laws and when disclosure is necessary to comply with applicable laws.

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

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

Consent Form for Research Participation and Personal Data Protection

Title of Project: The relationship between self-esteem, optimism, and resilience among undergraduates in Malaysia.

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

I understand I have been asked to take part in the research project specified above by UTAR students for the purpose of their Final Year Project. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records.

I understand that:

I will be asked to complete a questionnaire about the relationship between self-esteem, optimism, and resilience among undergraduates in Malaysia.

- YES
 NO

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My participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way

- YES
 NO

I may ask at any time for my data to be withdrawn from the project

- YES
 NO

No information I have provided that could lead to the identification of any other individual will be disclosed in any reports on the project, or to any other party

- YES
 NO

I will remain anonymous at all times in any reports or publications from the project

- YES
 NO

It is my sole responsibility to look after my own safety for the above project. In the event of any misfortune or accidental injury involving me, whether or not due solely to personal negligence or otherwise, I hereby declare that UTAR shall not be held responsible.

- YES
 NO

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

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

Please feel free to contact the researchers via email if you have any inquires.

jinxuan0703beh@1utar.my (Beh Jin Xuan)

muthiaharchanaa@1utar.my (Archanaa A/P Muthiah)

kayathri1042@1utar.my (Kayathri A/P Krishnamurthi)

Acknowledgment of Personal Data Protection Notice

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

Self-Esteem

PART A

Instructions: Please indicate the degree to which the following statements accurately describe you using the scale below.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

Strongly Disagree
(1)

Disagree
(2)

Agree
(3)

Strongly Agree
(4)

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	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
1. On the whole, I am satisfied with myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. At times I think I am no good at all.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I feel that I have a number of good qualities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I am able to do things as well as most other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I feel I do not have much to be proud of.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I certainly feel useless at times.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Please select 'Strongly Agree' for this question	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I feel that I'm a person of worth.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I wish I could have more respect for myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. All in all, I am inclined to think that I am a failure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I take a positive attitude toward myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Optimism

PART B

Instructions: Please indicate the degree to which the following statements accurately describe you using the scale below.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
0	1	2	3	4

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	Strongly Disagree (0)	Disagree (1)	Neutral (2)	Agree (3)	Strongly Agree (4)
1. In uncertain times, I usually expect the best.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. It's easy for me to relax.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. If something can go wrong for me, it will.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I'm always optimistic about my future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I enjoy my friends a lot.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. It's important for me to keep busy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I hardly ever expect things to go my way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I don't get upset too easily.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I rarely count on good things happening to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Overall, I expect more good things to happen to me than bad.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Resilience

PART C

Instructions: Please indicate the degree to which the following statements accurately describe you using the scale below.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
1. I tend to bounce back quickly after hard times	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
2. I have a hard time making it through stressful events.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. It does not take me long to recover from a stressful event.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. It is hard for me to snap back when something bad happens.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I usually come through difficult times with little trouble.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I tend to take a long time to get over setbacks in my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Please select 'Disagree' for this question	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Demographic Information

PART D

Instructions: Please fill in your personal details or circle ONE option.

a) Age:

b) Gender:

11/22/22, 4:41 AM

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- Male
- Female

c) Ethnicity:

- Malay
- Chinese
- Indian
- Others. Specify:

d) Religion

- Muslim
- Buddhist
- Hindu
- Christian
- Other. Specify:

e) University:

f) Year of Study (Ex. Year 1 Semester 3, Y1S3):

Appendix D: Demographic Statistics

Statistics

		Statistics				
		Age	Gender	Ethnicity	Religion	Year of Study
N	Valid	59	59	59	59	59
	Missing	0	0	0	0	0
Mean		21.220	1.68	2.12	2.29	
Std. Deviation		1.427	.471	.618	.929	
Minimum		19	1	1	1	
Maximum		24	2	4	5	

Age

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	19	11	18.644	18.6	18.6
	20	8	13.559	13.6	32.2
	21	9	15.254	15.3	47.5
	22	20	33.898	33.9	81.4
	23	10	16.949	16.9	98.3
	24	1	1.695	1.7	100.0
	Total	59	100.000	100.0	

Gender

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	19	32.203	32.2	32.2
	Female	40	67.797	67.8	100.0
Total		59	100.000	100.0	

Ethnicity

		Ethnicity			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	4	6.8	6.8	6.8
	Chinese	48	81.4	81.4	88.1
	Indian	3	5.1	5.1	93.2
	Others. Specify:	4	6.8	6.8	100.0
	Total	59	100.000	100.0	

University

		University			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	University Tunku Abdul Rahman	17	28.814	28.8	93.2
	Universiti Sains Malaysia	9	15.254	15.3	47.5
	University Tun Hussein Onn Malaysia	5	8.475	8.5	64.4
	Taylor's University	4	6.780	6.8	13.6
	University Teknologi Petronas	3	5.085	5.1	55.9
	INTI International College	2	3.390	3.4	3.4
	SEGi college	2	3.390	3.4	6.8
	Tunku Abdul Rahman University of Management and Technology (TAR UMT)	2	3.390	3.4	16.9
	UCSI university	2	3.390	3.4	20.3
	Universiti Kebangsaan Malaysia	2	3.390	3.4	25.4
	Universiti Malaya	2	3.390	3.4	28.8
	UOW Malaysia KDU University College	2	3.390	3.4	96.6
	Universiti Malaysia Sarawak (UNIMAS)	2	3.390	1.7	22.0
	UMP (Universiti Malaysia Pahang)	1	1.695	1.7	30.5
	Universiti Putra Malaysia	1	1.695	1.7	32.2
	Universiti Teknologi MARA (UiTM)	1	1.695	1.7	49.2
	UTeM (Universiti Teknikal Malaysia Melaka)	1	1.695	1.7	98.3
	UTM (University of Technology Malaysia)	1	1.695	1.7	100.0
	Total	59	100.000	100.0	

Appendix E: SPSS for Normality Assumptions

Skewness and Kurtosis

	Skewness	Kurtosis
Self-esteem	-.014	.504
Optimism	-.018	-.447
Resilience	-.262	-.237

Kolmogorov-Smirnov (K-S) Test for Variables

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SUM_RSES	.087	59	.200 [*]	.986	59	.742
SUM_LOTR	.132	59	.013	.971	59	.165
SUM_BRS	.087	59	.200 [*]	.974	59	.232

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Histogram

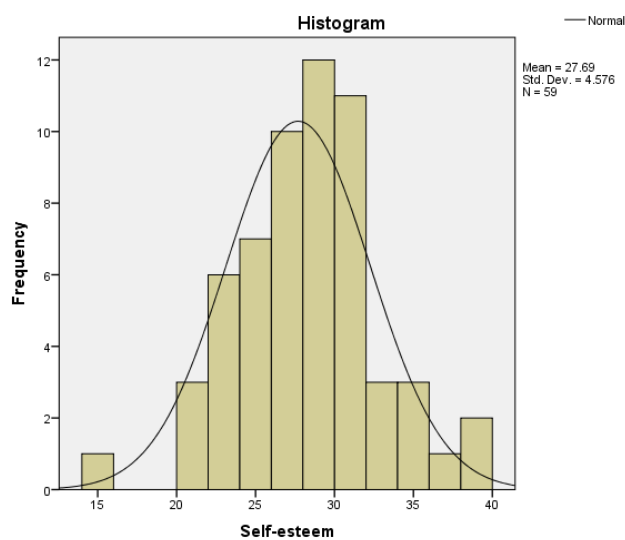


Figure 4.1 Normality distribution for self-esteem

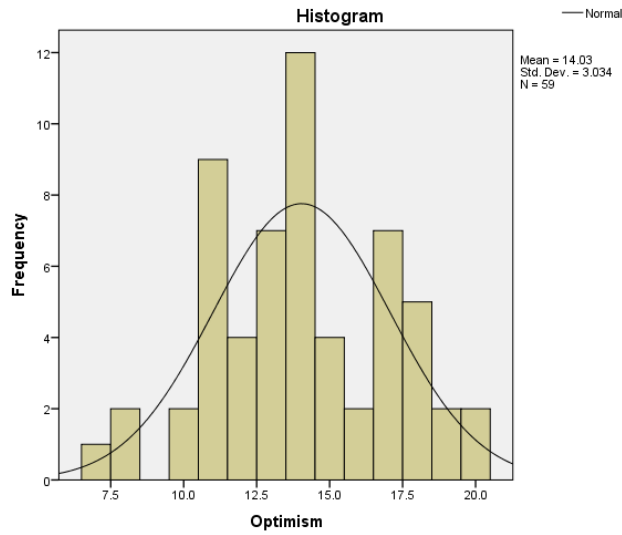


Figure 4.2 Normality distribution for optimism

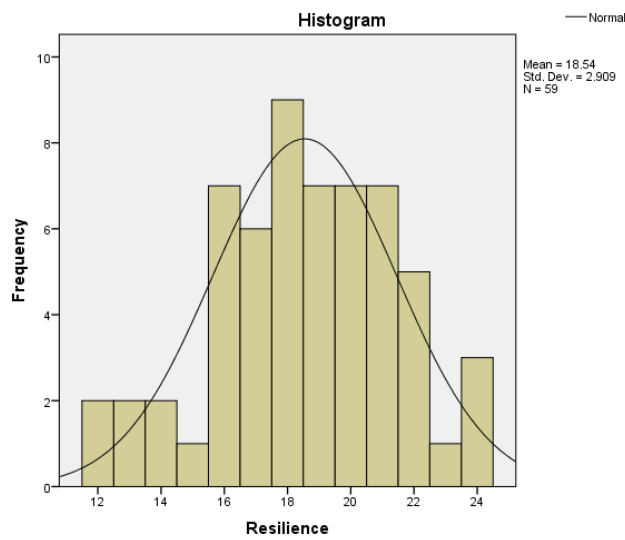


Figure 4.3 Normality distribution for resilience

P-P Plot

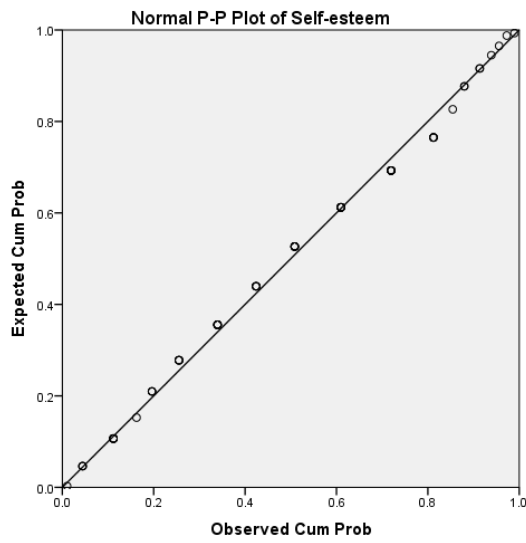


Figure 4.4 P-P plot distribution for self-esteem

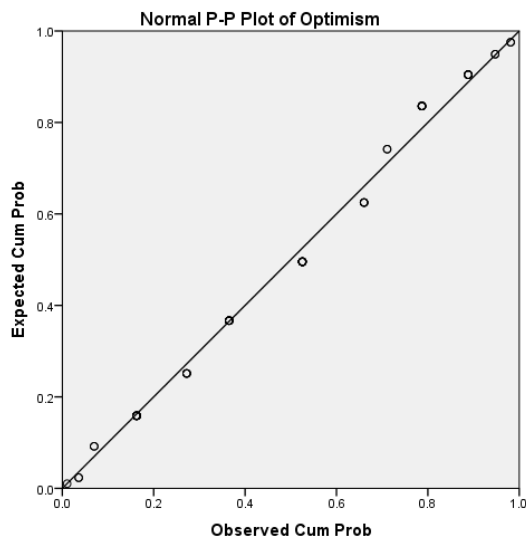


Figure 4.5 P-P plot distribution for optimism

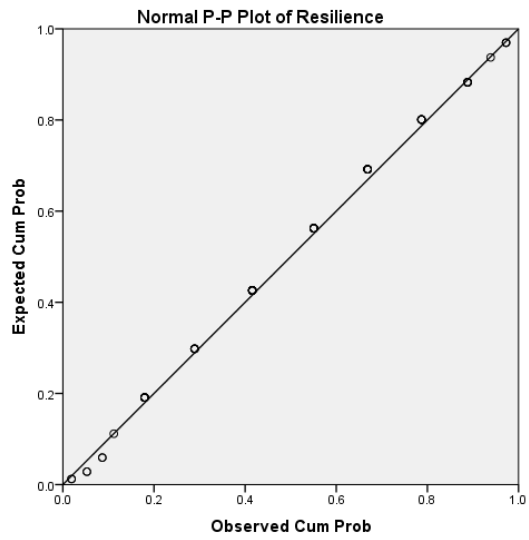


Figure 4.6 P-P plot distribution for resilience

Appendix F: Descriptive Statistics

Descriptive Statistics

Descriptive Statistics

	Mean	Std. Deviation	N
Self-esteem	27.695	4.576	59
Optimism	14.034	3.034	59
Resilience	18.543	2.909	59

Pearson Correlation Coefficient

Correlations

		Self-esteem	Optimism	Resilience
Self-esteem	Pearson Correlation	1	.532**	.535**
	Sig. (2-tailed)		.000	.000
	N	59	59	59
Optimism	Pearson Correlation	.532**	1	.619**
	Sig. (2-tailed)	.000		.000
	N	59	59	59
Resilience	Pearson Correlation	.535**	.619**	1
	Sig. (2-tailed)	.000	.000	
	N	59	59	59

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

Appendix G: SPSS for Multiple Regression Analysis

SPSS Output: Outlier

Casewise Diagnostics^a

Case Number	Std. Residual	SUM_BRS	Predicted Value	Residual
4	-2.228	15	19.93	-4.925
17	-2.285	13	18.05	-5.052
48	-2.484	12	17.49	-5.491

a. Dependent Variable: SUM_BRS

Multivariate Outliers Test

Case Summaries^a

	Case Number	Mahalanobis Distance	Cook's Distance	Centered Leverage Value
Group_Inferential case	1	1.94389	.00076	.03352
	2	.69957	.00598	.01206
	3	.52792	.00051	.00910
	4	5.13960	.00059	.08861
	5	1.03641	.02487	.01787
	6	1.70779	.00252	.02944
	7	4.26257	.09922	.07349
	8	.50805	.01006	.00876
	9	.47433	.00167	.00818
	10	5.43478	.11418	.09370
	11	4.49662	.04686	.07753
	12	1.70779	.00008	.02944
	13	.11733	.00122	.00202
	14	.20196	.00662	.00348
	15	2.79865	.01278	.04825
	16	.45511	.01774	.00785
	17	2.35789	.00948	.04065
	18	1.01258	.00070	.01746
	19	2.89107	.08114	.04985
	20	2.14055	.00934	.03691
	21	.50805	.00082	.00876
	22	1.48258	.01331	.02556
	23	.89647	.00005	.01546
	24	8.01341	.05210	.13816

	25	27	.77101	.00494	.01329
	26	28	1.50031	.00490	.02587
	27	29	.18545	.00454	.00320
	28	30	1.52540	.02589	.02630
	29	31	.36258	.00699	.00625
	30	32	.74003	.00004	.01276
	31	33	3.15809	.00562	.05445
	32	34	.11840	.00672	.00204
	33	35	.11733	.00000	.00202
	34	36	3.19566	.00026	.05510
	35	37	1.78153	.01342	.03072
	36	38	.90391	.00056	.01558
	37	39	.02983	.00044	.00051
	38	40	2.70994	.03436	.04672
	39	41	.11733	.00122	.00202
	40	42	8.66282	.03478	.14936
	41	43	.41985	.00301	.00724
	42	44	4.28829	.01596	.07394
	43	45	.11840	.00007	.00204
	44	46	.95607	.00406	.01648
	45	47	8.55715	.20639	.14754
	46	49	1.52540	.00437	.02630
	47	50	.18545	.02046	.00320
	48	51	.34787	.00414	.00600
	49	52	2.84307	.00762	.04902
	50	53	2.35789	.00095	.04065
	51	54	1.03641	.00196	.01787
	52	55	.95607	.00020	.01648
	53	56	1.94389	.04531	.03352
	54	57	3.45635	.00420	.05959
	55	58	2.60419	.00699	.04490
	56	59	2.84307	.01642	.04902
	Total	N	56	56	56
1	1	4	1.24284	.06865	.02143
	2	17	1.48258	.08069	.02556
	3	48	2.14055	.12370	.03691
	Total	N	3	3	3
Total	N		59	59	59

a. Limited to first 100 cases.

Regression Model

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	216.916	2	108.458	22.189	.000 ^b
	Residual	273.728	56	4.888		
	Total	490.644	58			

a. Dependent Variable: Resilience

b. Predictors: (Constant), Self-esteem, optimism

Tolerance and VIF values

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	7.224	1.844		3.917	.000		
	Self-esteem	.182	.075	.286	2.428	.018	.717	1.395
	Optimism	.448	.113	.467	3.960	.000	.717	1.395

a. Dependent Variable: Resilience

Model Summary as Self-esteem and Optimism as Predictors for Resilience

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.665 ^a	.442	.422	2.211	2.331

a. Predictors: (Constant), Self-esteem, Optimism

b. Dependent Variable: Resilience

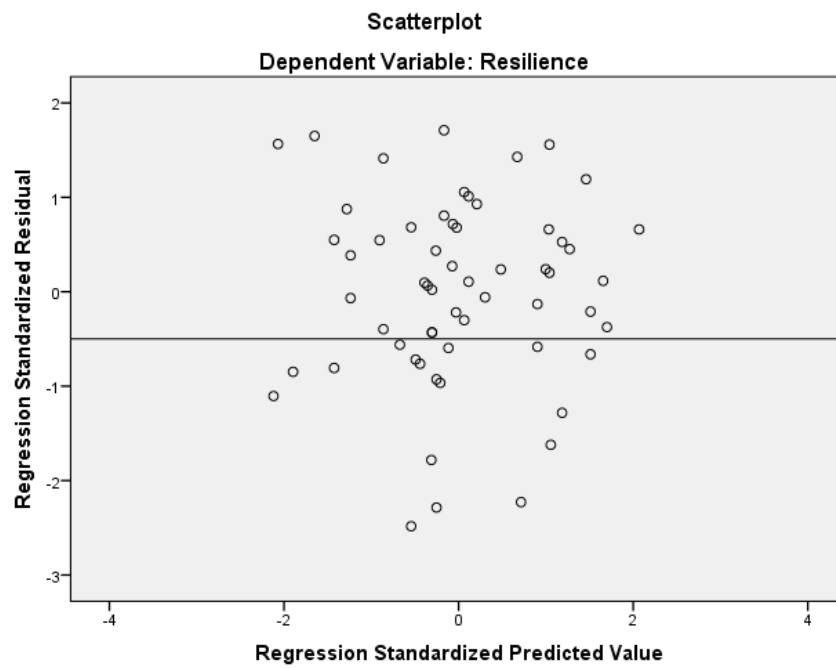
Scatterplot

Figure 4.7 Scatterplot Analysis of Assumptions for Linearity, Residual Normality and Homoscedasticity

Appendix H: Turnitin Report

The relationship between self-esteem, optimism, and resilience among undergraduates in Malaysia.

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