

THE IMPACT OF SELF-AWARENESS, EMPATHY,
AND SOCIAL SKILL ON SELF-LEADERSHIP
AMONG GENERATION Z IN MALAYSIA

LEE YAN
LOO XIN YU

BACHELOR OF BUSINESS ADMINISTRATION
(HONS)

UNIVERSITI TUNKU ABDUL RAHMAN

TEH HONG PIOW FACULTY OF
BUSINESS AND FINANCE
DEPARTMENT OF BUSINESS AND PUBLIC
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LEE & LOO	SELF-LEADERSHIP	BA(HONS)	APRIL 2026
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AND SOCIAL SKILL ON SELF-LEADERSHIP
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BY

LEE YAN
LOO XIN YU

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PREFACE

This study was conducted as part of the requirements for completing an undergraduate degree. The research topic is “The Impact of Self-Awareness, Empathy, and Social Skills on Self-Leadership Among Generation Z in Malaysia,” and it aims to explore the key personal and social factors influencing self-leadership among the younger generation.

In today’s highly competitive environment, people are prone to burnout. many young people are more likely to experience burnout but often do not know how to cope with it effectively. For Generation Z, who are entering the workforce, self-leadership has become increasingly important. It helps them make better choices, control their actions, and deal with challenges more easily in school or at work.

This study aims to explore how self-awareness, empathy, and social skills contribute to the development of self-leadership among Generation Z in Malaysia. These factors are believed to play a key role in shaping individuals’ self-leadership capabilities, interpersonal skills, and ability to achieve personal goals.

The findings of this study are expected to provide valuable insights for educators, organizations, and policymakers. By understanding these relationships, they can design more effective strategies, programs, and training initiatives to enhance the self-leadership capabilities of young people in Malaysia.

ABSTRACT

In modern organizations, self-leadership is becoming increasingly important, particularly among Generation Z, who are viewed as future leaders. However, issues such as stress, burnout, and low motivation indicate that many still lack sufficient self-leadership. Although previous studies have examined self-leadership in various contexts, research specifically targeting Generation Z in Malaysia remains limited. Therefore, this study aims to examine the influence of self-awareness, empathy, and social skills on self-leadership among Generation Z in Malaysia. This study employs the emotional intelligence framework and path-goal theory to test the relationships among these variables. Data were collected via an online questionnaire using convenience sampling, yielding a total of 384 valid responses. The collected data were analysed using SPSS version 31.0, with statistical analysis conducted via multiple linear regression. The results indicate that in Malaysia, self-awareness, empathy, and social skills are closely associated with self-leadership among Generation Z. These findings suggest that emotional intelligence-related competencies are particularly important for enhancing self-leadership among young people. Therefore, it is recommended that social organizations, businesses, and policymakers focus more on cultivating these key skills to help Generation Z better manage themselves and develop their self-leadership.

Keyword: Self-leadership, Self-Awareness, Empathy, Social Skill, Generation Z

Subject Area: HM1106-1171 Interpersonal relations. Social behavior

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LIST OF ABBREVIATIONS

IV	Independent Variable
DV	Dependent Variable
SL	Self-Leadership
SA	Self-Awareness
EM	Empathy
SS	Social Skill
UTAR	Universiti Tunku Abdul Rahman
SPSS	Statistical Package for the Social Sciences
VIF	Variance Inflation Factor

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CHAPTER 1: INTRODUCTION

1.0 Introduction

This research project examines the impact of self-awareness, empathy, and social skill on self-leadership Gen Z in Malaysia. The backdrop of the research, which offers an outline of the research background, will be provided throughout Chapter 1. The issue statements, research question, and hypotheses of the study come next. Furthermore, the study's significance, which outlines its importance, would be provided. Lastly, a chapter layout that provides a concise overview of each study chapter and a summary with a chapter conclusion is offered.

1.1 Research Background

1.1.1 Leadership

Leadership is a recognized activity that involves a leader and followers collaborating to achieve shared goals, affecting the activities of a group, and affecting shared aims. It also entails changing the future, inspiring followers, and helping them see what the future could be like. Pal (2022), Ressang-Wildschut et al. (2023) and Abasilim (2024) explained that leadership is not one idea but shows up in many forms like autocratic, bureaucratic, coaching, democratic, emergent, pacesetter, servant, strategic, transactional, transformational, and visionary leadership.

The method of accomplishing goals by persuading oneself to develop self-direction and self-motivation was known as self-leadership. Besides that, Daud (2021) stated that self-leadership is a significant discipline for contemporary leaders. This means actively guiding people in how they think, feel, and act to achieve objectives. Shek et al. (2015) proposed that self-leadership strategies are categorized into three types, behavior-focused strategies, natural reward strategies and constructive thinking patterns strategies. Firstly, behavior-focused tactics help people become more disciplined by using things like self-observation to keep an eye on their activities, self-goal setting to create clear goals, and self-reward or self-punishment to change their behaviour. Next, natural reward tactics boost your inner motivation by making a task more fun or by modifying how you think about the work so that it feels more rewarding. In addition, constructive thinking patterns strategies help people think more clearly by employing positive self-talk to boost your confidence, imagining success to boost your confidence, and questioning and changing negative beliefs to make your mind stronger and more effective.

1.1.2 Self-Leadership

The history of self-leadership commenced in the mid-1980s prioritizing intrinsic motivation and personal accountability above external direction (Van den Berg, 2025), and Manz developed it as an extension of self-management grounded in self-control theories (Quintero-Moros,2024). Then it became a definite theoretical and practical field, with a lot of research behind it and training and certification programs that put it into action Goldsby et al. (2021). by combining data from 2006 and 2010 using a Meta-Performance Model, self-leadership with professional development programs can help people accomplish better Goldsby et al.(2021). A subsequent assessment in 2025 indicated that the transition towards flatter,

knowledge-centric, and shared-leadership frameworks has rendered self-leadership increasingly pertinent, particularly in contrast to informal leadership Van den Berg (2025). A more recent meta-analysis by Harari et al.(2021) indicated that, over several decades, self-leadership has emerged as a fundamental construct in organizational psychology, supporting ways to improve job performance, self-efficacy, and positive workplace attitudes.

Furthermore, self-leadership can be defined as a proactive and progressive talent that allows individuals to accept responsibility for their personal growth and consistently enhance their performance in dynamic environments. Rather than simply managing behaviour, it is a deeper cognitive and motivational process in which individuals match their objectives, values, and actions for long-term effectiveness (Goldsby et al., 2021). This shows that self-leadership involves not just control, but also self-development and adaptation. Kim et al. (2024) highlighted that individuals who physical activity great self-leadership are better able to maintain engagement, make independent decisions, and effectively manage their own learning and career pathways. Individually, self-leadership improves self-discipline, resilience, and emotional regulation, helping people to deal with problems more effectively and perform consistently. Individuals with excellent self-leadership have a beneficial influence on others because they model responsible behaviour, motivate peers, and contribute to a more supportive and productive atmosphere.

Kim et al.(2024) shows that self-leadership is a great way to keep talented people, boost engagement, contentment, and loyalty by letting employees take charge of their own growth. This will lower turnover and draw in high-quality recruits. The important argument is that a leader's capacity to lead themselves is a good sign of whether an organization will do well. A lack of self-leadership at the person level is typically linked to poor organizational results. Self-leadership was not a substitute for traditional leadership; instead, it complemented it and improved both individual and organizational

outcomes. Goldsby et al. (2021) talked about the Meta-Performance Model (MPM), which demonstrates how self-leadership training, time management, and professional development can enhance leadership performance at individual, team, and organizational levels.

The main concerns of self-leadership, centre on how it affects performance, motivation, and flexibility in both organizational and educational settings. Studies repeatedly demonstrate that self-leadership enables individuals to regulate their behaviours and thoughts, hence enhancing resilience, innovation, and productivity. Blasco-Giner et al. (2023) found that psychological capital comprising hope, resilience, optimism, and self-efficacy encourages innovative work behaviour by enhancing employees' autonomous motivation. When employees feel intrinsically motivated, they are more willing to explore, share, and implement new ideas. However, this effect is more pronounced under participative leadership, in which managers value the opinions of their staff members and include them in decision-making. Such a supportive environment provides psychological safety, allowing the positive impact of psychological capital on innovation to be fully expressed. In contrast, in less participative settings, even employees with high psychological capital may feel restricted, weakening their innovative behaviours. Liu et al. (2023) also said that self-leadership encourages job crafting through intrinsic motivation, and that this effect is even stronger when leaders give employees more power, which shows how it works with different leadership styles. The era of remote work has also brought attention to occupational well-being. Nwoko and Yazdani (2024) say that self-leadership and psychological empowerment are both very important for keeping people engaged at work and mentally healthy in decentralized and digital workplaces.

Several fundamental assumptions and difficulties have been brought up by recent self-leadership research. One disagreement concerns conceptual clarity, Neck et al. (2020) pointed out that self-leadership significantly

overlaps with related concepts such as self-management and self-efficacy, thus obscuring its status as a distinct theory. Another concern is the potential "dark side" of self-leadership, wherein excessive self-directed activity within teams may diminish decision quality by fostering information bias and decreasing the rigor of group decision-making Cristofaro et al. (2023). Besides, Berg (2025) reported that self-leadership is becoming increasingly relevant in organizations that are flatter, more knowledge-based, and more decentralized. However, there is still dispute on how it differs from informal leadership.

There are also concerns with the methods used, since a lot of the evidence comes from cross-sectional studies and single-source data, which makes it impossible to show cause and effect. For instance, nursing research indicates that investigations of self-leadership are predominantly concentrated in certain places, frequently South Korea, and rely on limited sample sizes that hinder broader applicability Liu et al. (2023). Another assertion is to the outcomes of self-leadership training whereas programs frequently demonstrate immediate advantages, including enhanced stress resilience, job attitudes, and leadership competencies, their enduring impacts remain inadequately researched Tenschert et al. (2024). Additionally, Sjöblom et al., 2022 found that self-leadership tactics enhance well-being and adaptability in autonomous learning environments, such as remote study; nevertheless, there is a deficiency of longitudinal research to ascertain causal relationships and evaluate long-term outcomes. Additionally, Linnenborn and Borchert (2025) stated that although personal leadership aids individuals in navigating personal transitions and educational obstacles, empirical research investigating its influence on personal development and resilience beyond professional contexts is still few. These gaps indicate a necessity for further research into the role of self-leadership in assisting individuals, especially students, in managing their learning, motivation, and personal growth.

1.2 Problem statement

In decentralized and digitized workplaces, self-leadership and psychological empowerment are critical to maintaining employee engagement and mental health (Nwoko & Yazdani, 2024). Individuals lacking self-leadership tend to have low self-efficacy, believing they are unable to achieve their goals, which leads to decreased engagement, impacting motivation and performance (Patterer et al., 2024; Inam et al., 2021; Sambu, 2018). Insufficient leadership at the individual level is often associated with poor organizational performance.

Individuals with low self-leadership are prone to burnout and anxiety when under stress, which in turn reduce their overall productivity and quality of life (Elloy & Patil, 2014). In line with this, Kumar and Vasudevan (2024) note that the decline in employee performance and job satisfaction in Malaysia is associated with stress, lack of motivation, low pay, and inadequate leadership. This concern is reflected in the Employment Hero 2024 Workplace Health Report, which shows that burnout rates in Malaysia have increased from 58% in 2022 to 67% in 2024. Millennials were the most affected group at 69%, followed by Generation Z (64%), Gen X (61%), while Baby Boomers reported the lowest rate at 38%. The primary contributing factor across these groups is the struggle to achieve work-life balance (Naluri, 2025).

Research indicated that in Malaysia, approximately 67% of employees reported experiencing burnout in 2024, increase from 58% in 2022, which limit their ability to achieve a healthy work-life balance (Ainul, 2024; Rashidi, 2024). This suggests that self-leadership is essential for assisting staff members in managing stress and finding a work-life balance. The lack of self-leadership skills not only hinders company performance and productivity but also affects employees' ability to maintain their well-being. In contrast, strong self-leadership can enhance job

satisfaction, performance, and work engagement through time management and prioritization, ultimately achieving work-life balance (Nwoko & Yazdani, 2024).

Self-leadership enhances the management of work demands and reduces work stress, but without it, individuals cannot alleviate work stress through their own efforts (Neck & Houghton, 2006). Furthermore, low levels of self-leadership in turn impact work performance and job satisfaction (Choi & Kim, 2014).

Addressing the issue of low self-leadership is critical for Malaysia's future growth and development, as it directly affects employee mental health and organizational performance. Given that Generation Z will become Malaysia's future leaders, understanding how to cultivate self-leadership is particularly important for enhancing their stress management capabilities in academic, professional, and daily life settings.

Those born between 1997 and 2012 are referred to as Generation Z, who are rapidly emerging as a significant force in the labor market, approximately 27.34% of the total population (Joshi, 2025; LEV, 2021; DOSM, 2025). Generation Z, born into the digital age and often termed digital natives, witnessed the rise of the internet and digital globalization (Yılmaz, 2024). They have grown up in an interconnected, fast-paced environment where technology and social media can provide important social support and connections, but also exacerbate issues such as anxiety, depression, and stress.

Generation Z is chosen for this study because they are a large part of the future labour market and have the potential to become future leaders. However, 42% of Generation Z already express reluctance to pursue middle management roles, while 70% perceive managerial work as both highly stressful and poorly rewarded (CEC News, 2025). This reluctance toward leadership roles reflects Generation Z's distinct career values compared to previous generations. Unlike traditional focus on

promotion and positional power, Generation Z prioritizes autonomy, flexibility, and work-life balance (Salem, 2025; Gomes, 2025). For Generation Z, their psychological contract involves seeking guidance and growth opportunities from employers, viewing work as a means to achieve personal aspirations (Yilmaz, 2024). When workers feel that the psychological contract has been broken, they become burnt out and become less engaged by quietly leaving to preserve work-life balance and deal with stressful situations (Xueyun et al., 2023; Mahand & Caldwell, 2023).

Although Millennials exhibit higher burnout rates than Generation Z, Toner (2025) indicates that 87% of Millennials had already assumed leadership roles between 2008 and 2013. As Millennials increasingly become leaders and Baby Boomers gradually retire, this demonstrates that Millennials possess management and self-regulation capabilities. Meanwhile, Generation Z confronts a 64% burnout rate and heightened stress, necessitating the development of self-leadership to enhance resilience, performance, and satisfaction (Tenschert et al., 2024).

Numerous countries have conducted research on how self-leadership can enhance employee performance, work engagement, and stress management capabilities. For instance, Kim et al. (2025) examined self-leadership among South Korean nurses. In Indonesia, Sudiar et al. (2025) surveyed librarians to investigate the influence of social awareness on self-leadership. Brach et al. (2021) looked at how self-awareness, self-leadership, and self-efficacy help leaders stand out in the US. Furthermore, Lee and Jung (2022) investigated the connection between empathy and self-leadership among female South Korean university students.

In Malaysia, existing research focuses on STEM students and female entrepreneurs rather than Generation Z. For instance, Jamaluddin et al. (2025) examined self-leadership strategies among STEM students. Rasdi et al. (2020) explored self-leadership development among Malaysian female entrepreneurs. However, research on self-leadership capabilities among Malaysian Generation Z remains extremely limited. Therefore, Malaysia requires more empirical research, particularly on the

self-leadership capabilities of Generation Z, as they represent the emerging workforce and future leaders facing unique challenges such as digitalization, work-life balance, and career expectations. Because there is a dearth of research on self-leadership among Gen Z in Malaysia, it is crucial to examine Gen Z's self-leadership.

Previous research shows that a leader's self-awareness is positively significant to their followers' self-leadership, meaning that people who are more self-aware can guide and motivate themselves better (Bracht et al., 2021). However, Pillay and Hoque, (2021) found a non-significant link between self-awareness and effective leadership.

Empathy means being able to understand and feel what someone else is going through. According to Sudiar et al. (2025), found that empathy has a significant positive influence on self-leadership capabilities, indicating that people with higher levels of empathy are better able to direct and control their own behaviour. In contrast, Kellett et al. (2006), stated that empathy's relationship with leadership was not significant, shows that empathy may not directly influence leadership.

Social skill is a person's ability to connect, communicate, and build good relationships with others (Carson, 2011; Kim & Kim, 2024). Kim and Kim (2024), stated that communicative competence significantly influenced self-leadership among nurses. However, Carson (2011) reported that dimensions of social skill showed no significant link with ratings of leader effectiveness.

In short, existing research has found inconsistent results regarding the relationship between the dependent variable self-leadership and the independent variables (self-awareness, empathy, and social skills). As a result, it is still unclear how these independent factors relate to the dependent variable. Consequently, this study's goal is to close this gap.

Therefore, the purpose of this study is to investigate how self-awareness, empathy, and social skills on self-leadership among Malaysian Generation Z.

1.3 Research Objectives

1.3.1 General Objective

This study's main goal is to investigate how social skills, empathy, and self-awareness affect Gen Z (Gen Z) in Malaysia's self-leadership.

1.3.2 Specific Objectives

The following specific goals are established to achieve our general goal.

- I. To determine whether self-awareness and self-leadership among Malaysia's Gen Z are significantly correlated.
- II. To determine whether empathy and self-leadership among Malaysia's Gen Z are significantly correlated.
- III. To determine whether social skills and self-leadership among Malaysia's Gen Z are significantly correlated.

1.4 Research Questions

To guide our study, the following research questions are set.

- I. “Is there a significant relationship between self-awareness and self-leadership among Gen Z in Malaysia?”
- II. “Is there a significant relationship between empathy and self-leadership among Gen Z in Malaysia?”
- III. “Is there a significant relationship between social skills and self-leadership among Gen Z in Malaysia?”

1.5 Hypotheses of the Study

H1: There is a significant relationship between self-awareness and self-leadership among Gen Z in Malaysia.

H2: There is a significant relationship between empathy and self-leadership among Gen Z in Malaysia.

H3: There is a significant relationship between social skills and self-leadership among Gen Z in Malaysia.

1.6 Significance of the Study

This study seeks to explore the relationship between self-awareness, empathy, and social skills (independent variables) and self-leadership (dependent variable) Gen Z in Malaysia. As Generation Z is rapidly entering the workforce and taking on

leadership roles, understanding how self-awareness, empathy and social skill influence their self-leadership potential is crucial. For educators and universities, it will provide insights into how to include self-awareness, empathy and social skill in leadership programs to better prepare students for future leadership. By highlighting the importance of self-awareness, empathy and social skill in shaping self-leadership, this study contributes to both academic literature and practical leadership development in Malaysia.

1.7 Chapter Layout

This chapter provides a summary of the study background along with descriptions of the problem statement, research backdrop, objectives, questions, and hypotheses. A summary of the chapter is included at the end, along with a discussion of the significance of the findings.

In the second chapter, past research findings related to this study field are reviewed to build a theoretical foundation. This review of journals and articles identifies the topic's value and the important variables affecting the study. The chapter discusses the study's introduction, foundational theories, review of relevant literature, proposed conceptual model, and concluding remarks.

This chapter presents the approach and procedures used in the study. It discusses the study's introduction, overall design, participant selection, measurement of variables, processing and analysis of information, and final summary.

This chapter presents the chapter findings in line with the study's objectives. These results are essential to achieving the study's goals. The main sections are the

outcomes of inferential analysis, preliminary data screening, and descriptive analysis.

The chapter findings from the data analysis are covered in this last chapter, which concludes the study. It then offers some recommendations for how these findings might be applied by policymakers. Lastly, it discusses the limits of the study and provides solutions.

1.8 Chapter Summary

Overall, this chapter gives a clear overview of the study, which focuses on how self-awareness, empathy, and social skills that affect self-leadership Gen Z in Malaysia. It highlights the importance of the topic, identifies gaps in existing research, and outlines the study's objectives. This chapter provides a foundation for the entire study, starting with the research background until chapter layout. It also guides the transition to the next chapter, which will include a literature review, conceptual framework, and a discussion of the variables.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This chapter summarises current research and theory to investigate the elements influencing self-leadership among Gen Z in Malaysia. It is structured as follows: the literature on the dependent variable, self-leadership, is reviewed in the first section. Secondly, the relationships between self-leadership and the three independent variables, which is self-awareness, empathy, and social skill. Third, the chapter discusses the theoretical frameworks behind these relationships. The fourth part presents the conceptual framework. Finally, the study's hypotheses are developed. This summary helps explain the study's theoretical foundation and sets the stage for the following empirical research.

2.1 Review of the Literature

2.1.1 Self-leadership

Encouraging oneself to produce self-direction and self-motivation is the process of self-leadership. According to Stewart, Courtright, and Manz, (2019), who first conceptualized the construct, self-leadership extends beyond self-management by incorporating strategies that enable individuals to sustain intrinsic motivation and regulate their emotions in the face of challenges. Neck et. al. (2020) reported that, have positioned self-leadership

as an essential skill for employees and students in increasingly complex and digitalized environments.

Self-leadership has been shown to increase adaptability and well-being in work and virtual contexts. For example, a mandated virtual work study operationalized self-leadership behavior through behavioral-oriented strategies (e.g., goal-setting on one's own, monitoring oneself, and planning) and wellness-oriented strategies (e.g., maintaining recovery, work ergonomics, and physical activity) and showed how it can achieve psychological safety and reduce burnout (Sjöblom, Juutinen, & Mäkikangas, 2022).

A recent nursing practice scoping review emphasized that professional resilience and the delivery of high-quality nursing care are closely linked to nurses' capacity for self-leadership, which includes skills such as self-motivation, self-regulation, and proactive decision-making. However, the review noted that mostly cross-sectional studies with small samples limit the generalizability of findings on self-leadership, resilience, and nursing practice (Pursio et al., 2025).

The three techniques of behavior-focused, natural reward, and constructive thought patterns are all part of self-leadership, according to Neck et al. (2020). First, self-observation, goal-setting, self-reward, self-punishment, and reminders are examples of behavior-focused tactics (Neck & Houghton, 2006). This bears some resemblance to core behaviors in task-oriented leadership, such as setting performance goals, planning tasks, monitoring execution, and performance orientation (Döring et al., 2025). This confirms that the strategies encompassed within self-leadership are closely related to the core of task-oriented leadership. Next, Natural reward strategies, which help the individual not leaders or others to reframe work in a way that inherently done work feels enjoyable and has a sense of meaning even doing

aspects within a task which correspond to personal interests or personal values. In addition, the third strategies are constructive thought pattern strategies, refers to strategies like cognitive restructuring e.g., reshaping negative or unpromising thoughts into constructive thought patterns and positive self-talk self-motivation through use of affirmations, which constructively build resilience and drive in mutual ways. These strategies collectively enhance self-efficacy and adaptive performance. (Stewart et al., 2019).

Empirical studies in Malaysia support these arguments. Mohamad (2022) highlights that Generation Z students with strong leadership skills rooted in self-awareness, empathy, and social skills are better able to engage in self-leadership practices that meet both academic and professional demands. Similarly, Mohamad et al. (2024) show that youth leadership skills can be measured and validated through standardized assessment instruments such as scales of leader competencies, self-rating scales, and behavioral appraisals that map closely on to self-leadership behaviors. Such a finding further highlights self-leadership's importance among young Malaysians.

2.1.2 Self-Awareness

According to Welbeck et al. (2025), self-awareness is typically defined as possessing the ability to comprehend and identify one's own values, strengths and weaknesses, and emotions. It serves as the building block for emotional self-regulation, self-trust, and goal-directed behavior, serving as an internal compass for individual and professional growth Welbeck et al. (2025). Self-awareness, in leadership contexts, provides the anchor from which individuals align their decisions and actions to their core values and long-term aspirations.

Self-awareness has been considered a desirable skill enabling people to be flexible, resilient, and motivated in changing workplaces and economies (Krishnan et al., 2024; Welbeck et al., 2025). Researchers suggest that without self-awareness, leaders will not be aware of their steps, use strengths or weaknesses to improve strengths or weaknesses and hence become less effective. Recent studies on Malaysia's leadership have started recognizing self-awareness as a key element within emotional intelligence in decision-making, work performance, and self-leadership Toh et al. (2022).

Numerous research demonstrated a strong correlation between self-leadership and self-awareness. Welbeck et al. (2025) showed that self-awareness, in conjunction with self-regulation, can enable people to evaluate their own conduct and adapt it to meet personal goals. In short, people who are self-aware are likely to have good habits and better retain motivation than those who are not self-aware. Krishnan et al. (2024) showed that self-awareness was one of the highest-rated aspects of emotional intelligence for Malaysian managers, establishing its strategic importance for managing other people and managing oneself. Toh et al. (2022) further showed that those with high self-awareness are more likely to be motivated to meet their own values and personal accountability, both of which are robust predictors of self-leadership. Correspondingly, Kwartawaty et al. (2024) showed that Generation Z transformational leadership directly concerns self-awareness, since it provides young people with a strong personal identity and personal direction. These studies confirm that self-awareness is not merely a desirable competence but also a necessary building block of successful self-leadership.

While self-awareness has often been described to be essential, other studies suggest that its role might be limited or not significant. Krishnan et al. (2024) suggested that while managers reported self-awareness first, they still rated interpersonal skills and empathy just a little more central to everyday

success. This would suggest that self-awareness might not be enough to bring about appropriate self-leadership. Additionally, Bracht et al. (2021) found that leaders' self-awareness significantly influences followers' self-leadership, indicating that leaders' personal traits affect follower development. Toh et al. (2022) also suggested that outside influences such as organisational practices, cultural demands, or financial rewards would sometimes alleviate self-awareness's contribution. For example, a student would be self-aware of their values but still feel pressured to act otherwise because of their colleagues or academic institute's demands. Welbeck et al. (2025) further suggested that self-awareness without self-regulation might not lead to material differences, since knowing one's weaknesses is not immediately translated into action. Mohamad (2024) further suggested that measurement tools that account for only self-awareness might ignore its broader landscape of self-leadership, whereby motivation and behavioural tactics play their part. These suggest that self-awareness is indeed worthwhile, but its contribution is situational and about other facilitating variables.

Self-leadership and self-awareness studies utilized varied methodological approaches. Krishnan et al. (2024) applied the Delphi method with Malaysian managers and rated several features of emotional intelligence, previewing workplace relevance. Welbeck et al. (2025) surveyed SME managers, utilizing statistical models to explore the effects of self-awareness and self-regulation on job performance and demonstrating a clear association of personal knowledge with outcomes. Toh et al. (2022) surveyed Malaysian students, demonstrating how self-awareness affects their leadership responsibility and self-drive. Kwartawaty et al. (2024) performed a review of leadership style research with Generation Z, demonstrating that self-awareness is a common thread across youth leadership studies. Utilizing surveys, expert panels, and reviews, these studies collectively offer a broader and more dependable account of how self-awareness fosters self-leadership across varied situations. Bracht, Keng-Highberger, Avolio, and Huang (2021) examined the bivariate

correlations between follower self-leadership and leader self-awareness using correlation analysis.

Overall, the studies provide strong support and mixed limitations for self-awareness's contribution to self-leadership. To its advantage, self-awareness recurs time and again as a linchpin that affects motivation, responsibility, and personal transformation (Krishnan et al., 2024; Welbeck et al., 2025). To its disadvantage, however, many studies caution that self-awareness is never enough alone.

Variable procedures and samples produce mixed findings, with some showing strong positive relationships and others weak or conditional effects. In total, however, the writing suggests that self-awareness plays a necessary but mutually interdependent role in self-leadership: it provides the base, but its full potential is realized only with other personal and social competencies.

2.1.3 Empathy

Empathy refers to the emotional response of experiencing another person's situation rather than one's own (Meyer et al., 2013). Empathy comprises four factors: understanding others, feeling for others, sharing others' feelings, and maintaining self-other differentiation (Eklund & Meranius, 2020; Heyers et al., 2025). First, the ability to comprehend others' emotions and respond appropriately is crucial for successful interpersonal interactions (Leiberg & Anders, 2006). This represents attempting to understand and appreciate another person's "inner state" and engage in thoughtful reflection (Heyers et al., 2025). The second factor is feeling, feeling entails an emotional response to painful experiences, imagining and experiencing the situation through the

other person's perspective (Strauss et al., 2016). The third factor is sharing, which includes sharing experiences, sharing perceptions, and sharing feelings, primarily responding to others by experiencing similar emotions (Eklund & Meranius, 2020). The last factor is self-other differentiation, where the key to understanding others', emotions lie in distinguishing one's own psychological state from that of others (Steinbeis, 2016).

Regarding the impact of empathy on self-leadership, different studies have reported varying results. For instance, Lee and Jung (2022) discovered a positive correlation between university students' self-leadership and empathy, which suggested that people with higher empathy tend to have stronger self-leadership skills. Similarly, Rahman and Castelli (2013) found that empathy has a significant effect on leadership effectiveness, especially at higher levels. Since U.S. leaders have higher empathy than Malaysian leaders, the impact on leadership effectiveness is greater. Sudiar et al. (2025) also shows a significant relationship between empathy and self-leadership, meaning that students with higher levels of empathy exhibit greater self-leadership.

However, Kellett et al. (2006) found empathy to have no significant relationship with leadership. The inconsistent findings in existing literature may stem from differences in statistical methodologies. Sudiar et al. (2025) employed Correlation Analysis in their research of Indonesian librarians. Rahman and Castelli (2013) used t-tests of empathy scores to compare Malaysian and American business leaders. Additionally, Lee and Jung (2022) employed mediation analysis to examine the mediating role of empathy between mindfulness and self-leadership. However, Kellett, Sleeth, and Humphrey (2006) employed regression analyses.

Furthermore, differences in respondent selection across existing studies examining empathy's influence on leadership may contribute to differing

outcomes. Sudiar et al. (2025) selected Indonesian librarians as their respondents. Moreover, Lee & Jung (2022) focus on Korean female university students. Rahman and Castelli (2013) focused on business leaders from Malaysia and the United States. Additionally, Kellett et al. (2006) concentrated on the emergence of leadership within small group settings in the United States. Even within the same country, different respondent selection may get different results.

In summary, research findings on the impact of empathy on self-leadership are mixed results. This discrepancy may stem from differences in statistical methodologies employed across studies, or from variations among respondents across different countries. As a result, studying the link between empathy and self-leadership in different situations gives mixed results, which makes it hard to reach clear conclusions.

2.1.4 Social Skill

The concept of social skills is always changing. Thus, the capacity to communicate successfully in social situations is referred to as social skills (Grover, 2020). Social skills have three core components, such as attention-executive function, communication, and social-emotional components (Niu et al., 2025). Strong social skills enable individuals to maintain relationships through communication in the workplace. They also empower individuals to express both positive and negative emotions in interpersonal situations (Beheshtifar & Norozy, 2013; Soto-Icaza et al., 2015). Social skills also include both verbal and nonverbal communication methods. For instance, appropriate facial expressions, body language, eye contact, and assertive tone all contribute to effective message delivery (Bellack et al., 1997).

The relationship between social skills and self-leadership has been the subject of conflicting findings in earlier research. Research stated that social skills, particularly through communication skills significantly influence self-leadership among nurses in Korean medical stations (Kim & Kim, 2024). Additionally, research confirmed a significant association between social skills and students' leadership skills, supporting the view that administrative, interpersonal, and conceptual skills are crucial for effective leadership development (Gamotin et al., 2025). This finding, consistent with numerous studies, indicates that communication ability, as a core component of social skill, has a significant relationship with self-leadership. For instance, Kim and Sim (2020) show a significant relationship between communication ability and self-leadership. Similarly, Kim, Hong, and Lee (2025) found communication ability positively correlated with self-leadership among Korean nurses.

However, Carson (2011) has different results, finding that the various dimensions of social skills were non-significant in relation to subordinates' perceptions of leadership effectiveness.

The differing results in previous studies may stem from the use of varied statistical methodologies. For instance, Carson (2011) used correlation analysis to investigate the connection between leadership efficacy and social skills. Similarly, Gamotin et al. (2025) utilized correlation analysis to investigate the association between students' social skills and leadership skills within an academic setting. On the other hand, Kim and Sim (2020) applied structural equation modelling (SEM) to uncover the relationship between communication ability and self-leadership. Furthermore, Pearson correlation was employed by Kim, Hong, and Lee (2025) as well as Kim and Kim (2024) in their studies of Korean nurses.

Additionally, differences in the respondent examined when investigating the impact of social skills on leadership may also lead to divergent conclusions. Carson (2011) focused on employees in general organizations. In contrast, Kim and Kim (2024), Kim, Hong, and Lee (2025), and Kim and Sim (2020) studied Korean nurses, while Gamotin et al. (2025) selected first-year Bachelor of Science in Education (BSED) students as their respondents.

In summary, existing literature presents inconsistent findings regarding the relationship between social skills and self-leadership. This discrepancy may stem from differences in statistical methodologies employed across studies, and different in responders. Consequently, even when social skills are defined identically, different responders, and statistical methods can result in different outcomes in studies on self-leadership.

2.2 Theoretical Framework

The research questions and research goals as the foundation for developing the conceptual framework. It displays both independent and dependent variables. These variables are linked for testing. The association between self-leadership and the following explanations has been offered by earlier research. While self-awareness, empathy, and social skills are independent determinants, self-leadership is the dependent variable. These theories include: The model of Daniel Goleman and Path-goal theory.

2.2.1 Daniel Goleman's model (The Competence Model of EI)

The ability to successfully manage and constructively express emotions is what Goleman (1995) defined as emotional intelligence. Since emotional intelligence represents traits like self-control, enthusiasm, perseverance, and self-motivation, he claimed that it is a better indicator of success and personal effectiveness than IQ (Goleman, 1995; Mrisho, 2024). Emotional intelligence helps individuals understand and manage their own emotions as well as those of others (Goleman, 1995). The five fundamental elements of emotional intelligence, including self-awareness, self-regulation, motivation, empathy, and social skills, form the foundation of these abilities (Rahman et al., 2013). Goleman (1998) further developed the competency model of emotional intelligence, dividing these components into two domains. The first is personal competence, which involves motivation, self-control, and self-awareness; the second is social competence, which includes social skills and empathy (Singhet al., 2025). While personal competence primarily relates to the capacity to recognise and manage one's own emotions, social competence is the capacity to recognise and manage the emotions of others. (Goleman, 2001). Dividing it into two domains clarifies which parts involve self-regulation and which involve interpersonal interactions.

This model reveals that self-awareness enables individuals to recognize and understand their own emotions, swiftly overcome life's setbacks, and thereby enhance self-leadership capabilities; Empathy facilitates understanding others' emotions and needs, enabling effortless relationship-building; Social skills encompass abilities such as communication, collaboration, and leadership (Goleman, 1998; Chaidi & Drigas, 2022). Thus, Daniel Goleman's model illustrates the pivotal role of self-awareness, empathy, and social skills in enhancing self-leadership.

2.2.2 Path-goal theory

The research employs the Path–Goal Theory of Leadership, proposed by House (1971), to conceptualize the relationship between emotional intelligence dimensions which is self-awareness, empathy, and interpersonal skills and self-leadership. Path–Goal Theory proposes that leaders enhance performance by providing direction, removing obstacles, and matching assistance with followers' needs (House, 1996). By applying these principles to self-leadership, individuals internalize by setting clear goals, recognizing potential obstacles, and implementing strategies that help maintain their motivation. Self-knowledge here enables students to evaluate their strengths and weaknesses, empathy enables authentic interpersonal understanding, and social skills foster participative behaviors, which all address the directive, supportive, and participative dimensions of Path–Goal Theory (Fleishman et al., 1991).

Empirical studies have shown that emotional intelligence competencies are consistent with Path–Goal Theory mechanisms. For example, self-awareness results in directive clarity, enabling individuals to manage personal goals and coordinate actions accordingly (Kim, 2020; Hsu et al., 2022). Similarly, Kock et al. (2019) explained that empathy enables cooperation and trust, the same as supportive leadership under the theory. Social skills, as Boyatzis et al. (2017) note, facilitate teamwork and relationship management, which are identical with the participative role of Path–Goal Theory. Together, these attributes allow people to become self-leaders by assuming motivational and relational roles that would otherwise be anticipated from external leaders.

Besides, Path–Goal Theory provides relevant information for individual learning of leadership, as they desire independence, flexibility, and

meaningful interaction. Kwartawaty et al., (2024) found that Generation Z learners are open to leadership styles that promote independence and emphasize teamwork, which aligns with self-leadership practice. Through the congruence of emotional intelligence and Path–Goal Theory, this study constructs an integrative framework to assess how self-awareness, empathy, and social competence enable successful self-leadership amongst Malaysian university students.

2.3 Conceptual Framework

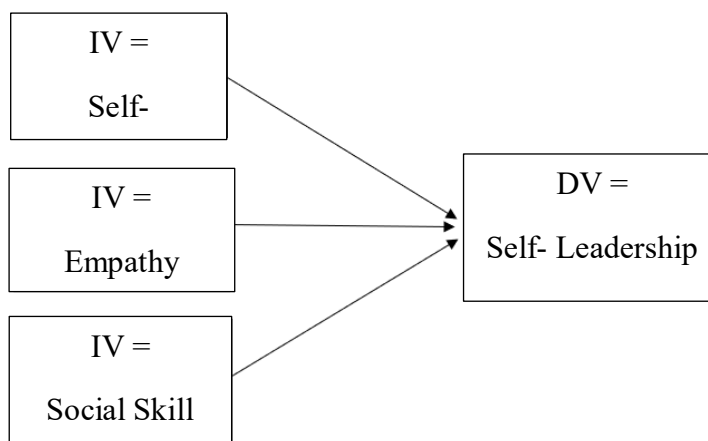


Figure 2.1. Conceptual Framework

Based on the theoretical models covered in the preceding part, a conceptual framework is created to investigate how self-awareness, empathy, and social skills affect self-leadership in Malaysian Generation Z. Three independent factors and one dependent variable make up this framework. It was anticipated that these many factors would significantly affect Generation Z's self-leadership based on prior research. This framework was used to assess the validity of this expectation, and in the next chapter, hypotheses were developed based on the findings.

2.4 Hypothesis Development

2.4.1 Self-Awareness and Self-Leadership

Self-awareness means knowing one's own emotions, strengths, and weaknesses. People with high self-awareness can set clear goals, control their feelings, and stay motivated. These are all needed for self-leadership (Rhee & Sigler, 2024).

Prereview studies examining the impact of self-awareness on self-leadership, shows that self-awareness is a critical factor in developing self-leadership (Bracht, Keng-Highberger, Avolio, & Huang, 2021). Rhee and Sigler (2024) found that training programs that focus on self-awareness improved leadership ability. Self-awareness supports the skills like motivation and self-control. These skills help people practice self-leadership. It is clear from the earlier researcher's work that self-leadership is significantly impacted by self-awareness. Therefore, the following is the initial hypothesis that has been created for this study:

H1: There is a significant relationship between self-awareness and self-leadership among Gen Z in Malaysia.

2.4.2 Empathy and Self-Leadership

Self-leadership and empathy are intimately related. To be empathetic, one must first know and control their own emotions before being able to understand and control those of others (Lee & Jung, 2021). Empathetic individuals make others feel understood and cared for. This not only helps reduce their stress but also enhances satisfaction and performance (Muss, 2025; Sadri et al., 2011). This means that individuals with high levels of empathy also possess high levels of self-leadership (Lee & Jung, 2022).

The effect of empathy on leadership in various circumstances has been the subject of numerous research. Research findings from Indonesia (Sudiar et al., 2025), South Korea (Lee & Jung, 2022), Malaysia, and the United States (Rahman & Castelli, 2013) consistently demonstrate that empathy significantly influences self-leadership. Thus, the following is the second hypothesis that has been created for this study:

H2: There is a significant relationship between empathy and self-leadership among Gen Z in Malaysia.

2.4.3 Social Skills and Self-Leadership

Finally, social skills are also closely linked to self-leadership. Individuals with high social skills understand how to do the right thing in the right situation (Breil et al., 2022). Communication ability, a crucial aspect of social skills, enhances self-leadership (Kim & Kim, 2024). Antonopoulou (2024) said that good social skills support motivation and responsibility, which are part of self-leadership. Rahman and Castelli (2013) found that

good communication and people skills improve leadership results. Zivkovic (2021) also showed that leaders with strong social skills build trust and control their own actions better.

Numerous studies have demonstrated the impact of social skills on leadership. Research indicates that in countries such as South Korea (Kim & Kim, 2024; Kim, Hong & Lee, 2025; Kim & Sim, 2020) and the Philippines (Gamotin et al., 2025), all studies have very similar points that social skills are a significant influence on self-leadership. Consequently, the third hypothesis put out in this research is:

H3: There is a significant relationship between social skills and self-leadership among Gen Z in Malaysia.

2.5 Chapter Summary

This chapter examines and literature reviews the key variables of the study: self-leadership as the dependent variable, and self-awareness, empathy, and social skill as the independent variables. It reviews relevant literature to clarify the relationships among these variables, develops a conceptual framework, and proposes testable hypotheses. This discussion establishes the theoretical foundation for the empirical analyses to be conducted in the next chapter.

CHAPTER 3: RESEARCH METHODOLOGY

3.0 Introduction

This chapter describes the research technique used to investigate self-leadership among Generation Z in Malaysia and the impact of social skills, empathy, and self-awareness on self-leadership. This study employs a quantitative research design, collecting raw data through an online questionnaire and utilizing quota sampling to obtain the sample. To ensure the validity and trustworthiness of the results, each component of this chapter attempts to clearly and methodically convey the research process.

3.1 Research Design

Research design is the plan adopted by researchers prior to data collection. It provides a methodological and technical framework throughout the research process, transforming research questions into analysable data while minimizing costs (Khanday & Khanam, 2019; Asenahabi, 2019). There are two sorts of research designs: qualitative research and quantitative research (Daniel, 2016).

Qualitative research primarily focuses on data quality, aiming to understand people's experiences, motivations, perceptions, and behaviors (Ghanad, 2023). Its core involves posing open-ended questions whose answers typically cannot be quantified numerically. Examples include “How is this done?” and “Why does this occur?” (Tenny et al., 2022). Quantitative research focuses on measurement and

data-driven analysis, addressing questions such as “How much,” “how long,” or “to what extent.” It involves gathering and analysing data to test hypotheses and arrive at conclusions (Ghanad, 2023).

The research design used in this study will be quantitative, analysing questions and variables through measurement and observation, and using this data to validate theories (Mehrad & Zangeneh, 2019). Data collection will employ a questionnaire featuring a fixed-option design, requiring participants to select from predetermined answers. This data will be presented in non-textual formats such as tables, charts and graphs (Ghanad, 2023).

This study employs quantitative research methods, as Kim and Sim (2020), Lee and Jung (2022), Kim and Kim (2024), and Carson (2011) also utilized this approach.

3.2 Data Collection Methods

Data collection was the process of acquiring measurements and observations. Data were divided into two main categories, which were primary and secondary data (Sadan, 2017). To achieve its objectives, this study used both primary and secondary data collection techniques.

3.2.1 Primary Data

Primary data is the most recent information and is defined as information that is acquired for the first time (Ajayi, 2023). Sources of primary data include interviews, questionnaires, and discussions (Sileyew, 2019).

This study collects data through questionnaires because this method precisely addresses the research questions. The study employs an online questionnaire to collect primary data, distributed via social media platforms. Respondents are required to select their answers by checking boxes (Ajayi, 2023).

Furthermore, questionnaires are chosen for their convenience and cost-effectiveness. This approach allows for a larger sample size while ensuring respondent anonymity, thereby reducing respondent concerns (Sadan, 2017). Previous studies also use questionnaires to collect primary data, such as Kim and Kim (2024), Gamotin et al. (2025), and Kim and Sim (2020).

3.3 Sampling Design

The process of choosing a subset of the target population as the sample in accordance with research needs and then extrapolating the features of the full population from the sample results is known as sampling (Martínez-Mesa, 2016). Without collecting sufficient respondent data using appropriate sampling techniques, it becomes difficult to achieve the primary objectives of the research (Rahman, 2023).

3.3.1 Target Population

The target population is the group under study. Identifying the target population facilitates the design of an appropriate sampling framework and

ensures that research findings can be generalized to a larger population (Hossan, 2023). This study examines how social skills, empathy, and self-awareness impact the self-leadership of Malaysia's Generation Z. This study focuses on Generation Z individuals aged 15 to 29 years, as it specifically targets those within the Malaysian labor force. This age range matches the data from the Department of Statistics Malaysia (DOSM, 2025) and another reason for choosing this range is that the legal working age in Malaysia starts from 15 years old. According to DOSM (2025), there are approximately 8.9475 million people in Malaysia aged 15 to 29 years, among whom about 5.3939 million are part of the labor force, representing roughly 15.82% of Malaysia's total population (DOSM, 2025). By concentrating on this segment, the study ensures that the findings are relevant to young working adults in Malaysia and can be generalized to the broader Gen Z labor population.

3.3.2 Sampling Location

Given that Generation Z within the labor force are the target demographic and the survey participants are focused on Malaysia, this study is conducted in Malaysia due to the current scarcity of relevant research in this country compared to others. The study primarily focuses on Generation Z individuals who are currently actively participating in the workforce. Therefore, the sampling locations for this research are situated in Malaysia, such as: Penang , Sabah and Sarawak.

3.3.3 Sampling Elements

During the research, specific sampling techniques are employed to select elements from these individuals for analysis. The selected elements for this study are Generation Z youth drawn from Malaysia's three major ethnic groups, such as Malay, Chinese and India in terms of different gender, age, ethnicity, level of education and state, the selected respondents are also diverse.

3.3.4 Sampling Technique

Sampling methodologies were divided into two primary types. Every member of the target population had an equal chance of being chosen using the first strategy, known as probability sampling. It started by creating a sampling frame, then selecting samples randomly, often using computer-generated numbers (Taherdoost, 2016). This method produced a representative sample, allowing results to be generalized to the population. It helped reduce bias, but was usually more time-consuming (Taherdoost, 2016; Elfil & Negida, 2017).

The second technique, non-probability sampling was unable to ensure that each member of the target population had an equal chance of being selected (Elfil & Negida, 2017; Hossan et al., 2023). The target population did not need to be representative or selected at random; the researcher selected the sample but had to provide clear justification for the selection (Taherdoost, 2016; Elfil & Negida, 2017).

In this study, convenience sampling was employed as a non-probability sampling method to select respondents from Malaysia's Generation Z cohort. The reasons for choosing convenience sampling were its affordability, efficiency, and ease of implementation (Jager et al., 2017; Elfil & Negida, 2017). Although the sample was not randomly selected and came from a small, easily accessible group that did not include all types in the target population, the participants usually did not fully represent everyone (Hossan et al., 2023; Taherdoost, 2016). Nevertheless, convenience sampling remained appropriate.

Moreover, numerous studies on leadership had employed convenience sampling, which was widely used. For example, Kim and Sim (2020) employed convenience sampling within non-probability sampling to study data from a nursing cohort. Additionally, Sudiar et al. (2025) employed convenience sampling to collect data from Indonesian librarians. Therefore, despite its limitations, convenience sampling was still a practical and efficient way to collect meaningful data from accessible participants, especially when time and resources were limited.

3.3.5 Sampling Size

The ideal number of samples needed for a study is known as the sample size. A statistical technique called Krejcie and Morgan's Table is used to determine the proper sample size for a study or survey based on the size of the entire population (Mohanasundaram et al., 2024).

This study targets Generation Z individuals within Malaysia's labor force. Based on Krejcie and Morgan's table recommendations, with approximately

5.3939 million Generation Z individuals in Malaysia's labor force (DOSM, 2025), the sample size should be 384 (Refer to Appendix 1.3).

3.4 Research Instrument

3.4.1 Questionnaire

The primary objective of the questionnaire survey is to collect data suitable for statistical analysis. In recent years, questionnaire surveys have evolved into a rigorous research methodology. The term “survey” encompasses not only the distribution of questionnaires but also research objectives, sampling, selection of data collection tools, and overall survey management approaches (Ponto, 2015). This questionnaire survey employs fixed-choice questions, requiring respondents to select answers based solely on their personal views.

The study's questionnaire is divided into five sections and a cover page. Target respondents' personal data, including gender, age, ethnicity, and educational background, is gathered in Section A. This serves to confirm whether respondents meet the eligibility criteria. Section B contains five questions designed to measure respondents' self-leadership. Section C includes five questions regarding the impact of self-awareness factors on self-leadership. Section D's five questions examined another factor: the impact of empathy on self-leadership. Finally, Section E comprised five questions regarding the influence of social competence factors on self-leadership.

5-point Likert scales are used to ask respondents how much they agree or disagree (Sullivan & Artino, 2013). This study uses a 5-point Likert scale, with 1 representing “Strongly Disagree” and 5 representing “Strongly Agree,” because Kim & Sim, (2020), Lee and Jung (2022), Kim and Kim (2024), and Carson (2011) also use a five-point Likert scale to collect data on leadership from respondents. All responses are aggregated to derive scores for each indicator.

3.4.2 Pre-testing

Prior to distributing the questionnaire to Malaysian Generation Z participants, it is review by two lecturers from the university.

3.4.3 Pilot Test

A pilot study is a small-scale test conducted prior to the main research, serving as the initial phase of the overall research process (Anupama et al., 2023). Specifically, it tests the research plan, data collection tools, participant recruitment methods, and other research instruments (Hassan et al., 2006). It also gathers data from a subset of participants to identify potential issues. Conducting a pilot test enhances questionnaire quality; if results are unsatisfactory, modifications can be made before deployment in the large-scale study.

Based on the recommendations of Bujang et al. (2024), the sample size for the pilot test in this study is set to 30 respondents. A total of 30 online questionnaires were distributed using Google Forms. Google Forms

automatically collects responses, enabling real-time submission rate tracking. Concurrently, quality checks were conducted on all collected data to assess the reliability of the questionnaire.

3.5 Constructs Measurement

3.5.1 Scale of Measurement

Measurement scales are tools for collecting and analysing data, and they come in four types: nominal, ordinal, interval, and ratio (Shukla, 2023).

3.5.1.1 Nominal Scale

Nominal scale data are not ordered and have no inherent sequence. This is because they merely distinguish attributes by name, and these attributes cannot be ranked or compared (Shukla, 2023). Nominal scales are used solely to label variables that cannot be arranged in any order. Therefore, in this study, gender and states are represented using a nominal scale, as follows:

Example of nominal scale:

1. Gender

[] Male

[] Female

3.5.1.2 Ordinal Scale

An ordinal scale is a measurement level that ranks and classifies data but cannot measure the actual magnitude of differences between categories. Although it can be represented numerically, these numbers only denote order and are meaningless for operations (Shukla, 2023). For instance, putting agreement levels on the Likert scale ranging from "strongly disagree" to "strongly agree" shows order without quantifying the exact difference between each step. As Larroulet Philippi (2021) said, ordinal scales are widely applied in social sciences because they allow ordered comparisons but do not support arithmetic manipulation like the calculation of means. Schnuerch et al. (2022) also highlighted that ordinal data can be mistakenly interpreted by parametric analysis if the non-equal rank spacing is overlooked. Ordinal scale in this study is employed within Section A to group participants by age groups to allow ranking of groups without necessarily enjoying the realization that between-group differences are numerically equal. Therefore, in this study, age is represented using an ordinal scale, as follows:

Example of ordinal scale:

2. Age:

[] 15 to 19 years old

[] 20 to 24 years old

[] 25 to 29 years old

3.5.1.3 Interval Scale

Numerical data that depicts "the space between two points" is called interval-scale data. It shows order as well as the extent to which values diverge from one another (Shukla, 2023). Interval scales enable us to measure the difference between two values and perform mathematical operations such as addition and subtraction. For example, Celsius temperature measurements and standardized test scores also fall under interval data, where the intervals between values are equal, but zero does not indicate the absence of the variable (Schober, Boer, & Schwarte, 2018). Likert-scale questions are used in Sections B, C, D, and E of this study to measure the dependent and independent variables. It is assumed that the scale approximates an interval measurement.

Example of interval scale:

No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I try to calm someone who is afraid.	1	2	3	4	5

3.5.2 Origin of Construct

Table 3.1:

Summary of Measures Used in This Study

Variables	Adapted from	Items	Scale
Dependant Variable: Self-leadership	Houghton, & Neck, (2002)	8 items	Not at all accurate (1) to Completely accurate (5)
Independent variable 1: Self-awareness	Govern, & Marsch, (2001)	6 items	Strongly disagree (1) to Strongly agree (7)
Independent variable 2: Empathy	Malakcioglu (2022)	6 items	Strongly disagree (1) to Strongly agree (5)
Independent variable 3: Social Skill	Uslu & Genç, (2021)	6 items	Absolutely disagree (1) to Absolutely agree (5)

3.5.3 Measuring Dependent and Independent Variables: Definition of Operations

In this study, the Impact of self-awareness, empathy, and social skill on self-Leadership Gen Z in Malaysia. Uses a five-point Likert scale for dependent variables and three independent variables.

3.5.3.1 Self-leadership

The process of persuading oneself to control one's ideas, feelings, and actions to act in an ideal way is known as self-leadership (Houghton & Neck, 2002).

This study employs six self-leadership questionnaire items adapted from Houghton, & Neck, (2002) including: “I consciously have goals in mind for my work efforts.”, “I think about my own beliefs and assumptions whenever I encounter a difficult situation.”, “I establish specific goals for my own performance.”, “I work toward specific goals I have set for myself.”, “I make a point to keep track of how well I’m doing at work.”, “I pay attention to how well I am doing in my work.”, “I keep track of my progress on projects I’m working on.”, and “I focus my thinking on the pleasant rather than the unpleasant aspects of my job activities.”

3.5.3.2 Self-Awareness

Self-awareness is the capacity to comprehend one's own feelings, ideas, and behaviours, recognize how they impact oneself and others, and direct actions for development and transformation (Goleman, 1995; Houghton & Neck, 2002).

This study employs six self-awareness questionnaire items adapted from Govern, and Marsch, (2001), including: “Right now, I am keenly aware of everything in my environment.”, “Right now, I am conscious of my feelings.” and “Right now, I am concerned about the way I present myself.”, “Right

now, I am self-conscious about the way I look.”, “Right now, I am conscious of what is going on around me.”, and “Right now, I am aware of my innermost thoughts.”.

3.5.3.3 Empathy

Empathy means understanding others, feeling for others, sharing others' feelings, and maintaining self-other differentiation (Eklund & Meranius, 2020).

This study uses five empathy questionnaire items adapted from Malakcioglu, (2022), including: “Being together with a sad person, I feel sad too.”, “I sincerely congratulate my successful opponent.”, “I get angry at the wrongdoer character in a story.”, “I do not hesitate to help a harmless animal in hardship.”, “I try to calm someone who is afraid.” and “I understand people’s feelings from their behavior.”

3.5.3.4 Social Skill

Social skills refer to the ability to interact, communicate, and build relationships effectively with others in social situations (Grover, 2020).

This study employs five social skill questionnaire items adapted from Uslu & Genç, (2021), including: “I am good at managing group discussions.”, “When I encounter a problematic situation, I find a solution by thinking about the problem from different perspectives.”, “I have difficulties in

expressing my feelings”, “I make eye contact while talking about a topic about myself. ” and “I avoid sharing information about my field.”

3.5.4 Questionnaires Designing

The five sections of this questionnaire are A, B, C, D, and E. Respondents' personal information is gathered in Section A. It has four questions: gender and ethnicity are measured using a nominal scale, and age and educational attainment are measured using an ordinal scale.

Section B comprises six questions designed to measure the dependent variable, self-leadership. A Likert scale is employed here, scored on an interval scale. Respondents indicate their opinions by choosing a number between 1 and 5. The numbers 1 through 5 represent "Strongly Disagree," "Disagree," "Neutral," "Agree," and "Strongly Agree," respectively

Sections C, D, and E each have five questions measuring the independent variables of self-awareness, empathy, and social skills. This section employs an interval scale for measurement, utilizing a Likert scale for question design. The numbers 1 through 5 represent "Strongly Disagree," "Disagree," "Neutral," "Agree," and "Strongly Agree," respectively, same like in Section B. Following questionnaire collection, SPSS 31.0 software is used to assess the data's reliability.

3.6 Data Processing

Data processing generally involves five steps: first, data review; second, data entry and validation, which entails inputting data and confirming its accuracy; third, data cleaning, which involves removing errors; fourth, data editing, where modifications and adjustments are made; and finally, documentation organization (Zhu et al., 2013). Therefore, upon receiving respondent data, it is essential to ensure its accuracy and convert it into information. Anastasya and Yuadi (2024) shows that SPSS offers comprehensive functionality for data processing and testing, enhancing analytical efficiency and accuracy. Consequently, this study will utilize specialized computer software such as SPSS 31.0 to complete data processing tasks.

3.6.1 Data Checking

Data checks are conducted to ensure all questionnaires are valid and free of missing or inconsistent information (Jedinger et al., 2018). This process typically occurs after questionnaires are completed.

3.6.2 Data Editing

Data editing involves modifying and adjusting missing or invalid responses from respondents after data verification. Invalid data encountered during research can be divided into three categories. The first type arises from respondents' limited language proficiency, leading to misunderstandings of questions. The second type involves deliberate distortion of facts, where respondents conceal or fabricate information. The third category arises from

respondents carelessly or inattentively filling in answers (Curran, 2015). This study will employ three handling methods for such cases: First, recontact respondents to supplement their responses. Second, if recontact is impossible, directly assign the default answer. Third, exclude the respondent's data entirely.

3.6.3 Data Coding

Data coding is the process of analysing data by assigning codes, such as giving each questionnaire response a code. For example, a question about the respondent's gender might assign a code of 1 for female and 2 for male. The SPSS 31.0 program will be used to insert these number codes.

For Section A, here's how each question's answer is coded:

Q1	Gender	"Male" = 1 "Female" = 2
Q2	Age	"15 to 19 years old" = 1 "20 to 24 years old" = 2 "25 to 29 years old" = 3
Q3	Highest level of schooling attained	"Diploma" = 1 "Bachelor Degree" = 2 "Master Degree" = 3 "Others, please specify" = 4

Q4	States	“Johor” = 1 “Kedah” = 2 “Kelantan” = 3 “Melaka” = 4 “Negeri Sembilan” = 5 “Pahang” = 6 “Perak” = 7 “Perlis” = 8 “Pulau Pinang” = 9 “Sabah” = 10 “Sarawak” = 11 “Terengganu” = 12 “Kuala Lumpur” = 13 “Labuan” = 14 “Putrajaya” = 15
Q5	Ethnic group	“Chinese” = 1 “Malay” = 2 “Indian” = 3 “Others” = 4

In Section B, C, D, and E each answer is scored on a 5-point Likert scale:

- Strongly Disagree (SD) = 1
- Disagree (D) = 2
- Neutral (N) = 3
- Agree (A) = 4
- Strongly Agree (SA) = 5

3.6.4 Data Transcribing

Finally, data transcription is performed, which refers to the process of entering collected questionnaire data into a computer. Data transcription involves converting oral or unstructured data into written text (Eftekhari, 2024). It assists researchers in transforming recordings, conversations, and similar materials into analysable textual data, ensuring accurate transcription to the highest quality. SPSS 31.0 software is used throughout the data processing stage.

3.7 Data Analysis

The purpose of data analysis is to pull out useful information from the data, use it to make decisions, and see if the hypotheses in this study are true (Islam, 2020).

3.7.1 Descriptive Analysis

Descriptive analysis serves as the initial step in conducting research, rendering data more comprehensible and thereby facilitating the management and evaluation of specific populations (Kaur et al., 2018). Sample features like frequency distributions, indices of central tendency, and variability are mainly depicted by descriptive statistics. The specific statistical method employed depends on the variable type (George, 2023).

Frequency distribution involves organizing and sorting data based on the number of times each value appears (Cooksey, 2020). The most popular techniques for summarising the traits of research participants are measures of central tendency, such as mean, median, and mode. Measures of variability encompass range, minimum and maximum values, quartiles, and standard deviation (Bulanov et al., 2021; George, 2023). In this study, pie charts are used to present the data from Section A and tables to show the data's mean, standard deviation, frequency, and percentage.

3.7.2 Scale Measurement

3.7.2.1 Reliability Test

Reliability testing is used to assess the stability and consistency of measurement tools, calculating the variation between responses (Bolarinwa, 2015). Cronbach's alpha is an internal consistency measure commonly used to calculate the correlation between variables. Usually, its estimated value falls between 0 and 1, with values nearer 1 denoting greater consistency (Sullivan, 2011; Saidi & Siew, 2019).

Table 3.2:

Cronbach's Alpha Rule of Thumb

Cronbach's Alpha	Internal Consistency
$\alpha \geq 0.90$	Excellent
$0.70 \leq \alpha < 0.90$	Good
$0.60 \leq \alpha < 0.70$	Acceptable
$0.50 \leq \alpha < 0.60$	Poor
$\alpha < 0.50$	Unacceptable

Source: Peterson et al. (2024)

If Cronbach's alpha is below 0.5, the scale is unacceptable. Values between 0.5 and 0.6 reflect low reliability, while those from 0.6 to below 0.7 are acceptable. When the value falls between 0.7 and below 0.9, it demonstrates good reliability, and values of 0.9 and above indicate excellent internal consistency (Saidi & Siew, 2019).

3.7.3 Preliminary Data Screening

3.7.3.1 Multicollinearity

When at least two independent variables in a regression model have a high correlation ($r > 0.8$), this is known as multicollinearity, and it negatively

impacts the regression analysis (Vatcheva et al., 2016; Kim, 2019). Variance inflation factors (VIF) and tolerance values can also be calculated using SPSS. When the tolerance value is below 0.1 and the variance inflation factor exceeds 10, it indicates the presence of multicollinearity in the model (Gurung, 2024).

3.7.3.2 Normality

To ascertain whether data follow a normal distribution, statisticians employ normality tests. Deviations from normality may compromise the accuracy of p-values and confidence intervals. While minor deviations in regression models have limited impact, significant outliers can substantially affect model performance (Jones et al., 2025). Therefore, the assumption of normality must be satisfied. To satisfy normality, tests can be conducted to determine whether the data distribution is normal.

The first detection method involves examining skewness and kurtosis. When skewness equals 0 and kurtosis (excess) equals 0, it indicates that the dataset exhibits a symmetric distribution or a normal distribution (Hatem et al., 2022; Mishra et al., 2019). The data may be non-normally distributed if the absolute values of skewness and kurtosis are greater than two or seven, respectively. However, if skewness falls between negative 2 and positive 2 and kurtosis falls between negative 7 and positive 7, the data can be regarded as regularly distributed given the study's sample size of 384 ($n > 300$) (Kim, 2013).

The second method involves examining a histogram. In a normal distribution, the median is positioned at the centre of the box plot, with values decreasing gradually on both sides, resulting in equal widths on either

end. If the distribution is not normal, the median will be closer to one end of the box plot, creating a noticeable skew (Paramasivam et al., 2024).

3.7.4 Inferential Analysis

Multiple linear regression analysis is the best approach when this data may be utilised to examine the relationship between a continuous dependent variable and multiple independent factors (Slinker & Glant, 2013). This study uses multiple linear regression to look at how self-leadership, the dependent variable, is related to self-awareness, empathy, and social skills, which are the independent variables. This analytical approach allows for an assessment of how these independent variables interact and collectively influence variations in the dependent variable.

3.7.4.1 Multiple Linear Regression Analysis

Multiple linear regression is employed in this study since there are three independent variables and one dependent variable. After the analysis is complete, the ANOVA table is used to determine whether the model is statistically significant, and the model summary table helps demonstrate the extent to which the model explained the variation in the dependent variable. Simultaneously, ascertain whether each independent variable has a substantial impact and whether its influence on the dependent variable is positive or negative, the coefficient table is simultaneously analysed (Dhakal, 2018).

In regression models, R^2 which runs from 0 to 1, indicates how much of the change in the dependent variable can be accounted for by the independent variables in regression models. An R^2 greater than 0.6 suggests strong explanatory power of the independent variables, while an R^2 below 0.3 indicates weak explanatory power (Bordbar, 2025).

A level of significance is indicated if the p-value is less than 0.01, 0.05, or 0.10. A result is deemed highly significant when $p < 0.01$, significant when $p < 0.05$, and still significant when $p < 0.1$ (Maneejuk & Yamaka, 2020). A significant association between the independent and dependent variables is indicated if the p-value is less than 0.1.

The formula for the multiple linear regression is

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

y = dependent variable

X_1 = Self-Awareness

X_2 = Empathy

X_3 = Social Skill

β = parameter

ε = Error

This study will use this multiple linear regression equation formula (Uyanık & Güler, 2013). All independent variables are thought to have a major impact on the dependent variable, according to the Hypothesis Development section of Chapter 2.

3.8 Chapter Summary

In summary, this chapter details the research methodology, explaining the study design, data collection methods, and sampling strategy. It specifically outlines the target population, sampling frame, and sample size. Additionally, it addresses the research instruments, measurement scales, and variable definitions. Furthermore, this study conducts pre-tests and trial runs prior to formal testing, ultimately distributes questionnaires and collects data from 370 Generation Z individuals in Malaysia. After gathering sufficient responses, the chapter concludes with a discussion of data processing and analysis methods, laying the groundwork for the findings and interpretations presented in the subsequent chapter.

CHAPTER 4: RESEARCH RESULTS

4.0 Introduction

This chapter mainly focuses on data analysis. Data analysis is the primary topic of this chapter. The descriptive analysis is carried out first. Second, to make sure the scales are dependable, a reliability test is carried out. Thirdly, multicollinearity is checked through preliminary data screening. Lastly, multiple linear regression analysis was conducted using SPSS 31.0.

4.1 Descriptive Analysis

First, descriptive analysis is carried out to make the data easier to understand. It is first applied to the demographic data collected in Section A of the questionnaire. Then, the data from Sections B, C, D, and E are also analyzed in the same way. In addition, the results are presented using graphs, such as pie charts.

4.1.1 Respondents' Demographic Profile

Gender, age group, educational background, ethnicity, and states are the five categories of demographic data used in this study. The following sections analysed these data points individually.

4.1.1.1 Gender

Table 4.1:

Gender-Specific Descriptive Analysis

Gender	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
Male	160	41.7	160	41.7
Female	224	58.3	384	100

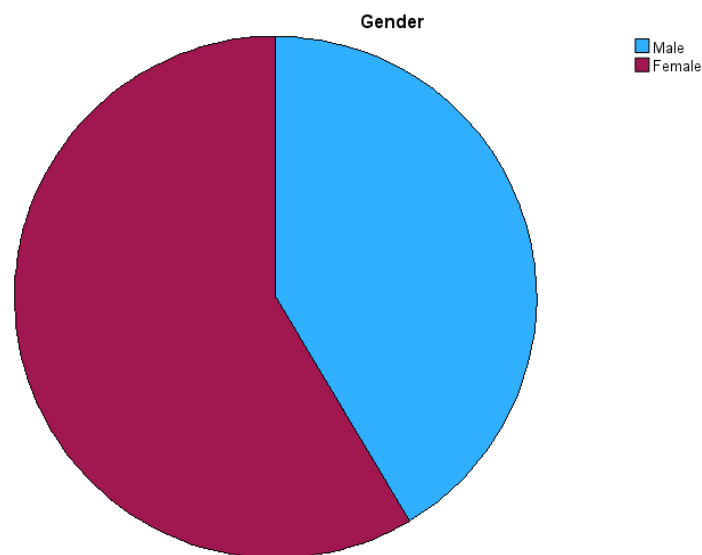


Figure 4.1. Gender-Specific Descriptive Analysis

First, the respondents were grouped by gender. Table 4.1 shows that a total of 384 Gen Z individuals participated in this survey. Combining the data from Table 4.1 and Figure 4.1 reveals that 41.7% were male (160 respondents) and 58.3% were female (224 respondents). Therefore, female participants outnumbered male participants.

4.1.1.2 Age Group

Table 4.2:

Age Group Descriptive Analysis

Age	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
15 to 19 years old	45	11.7	45	11.7
20 to 24 years old	239	62.2	284	74
25 to 29 years old	100	26	384	100

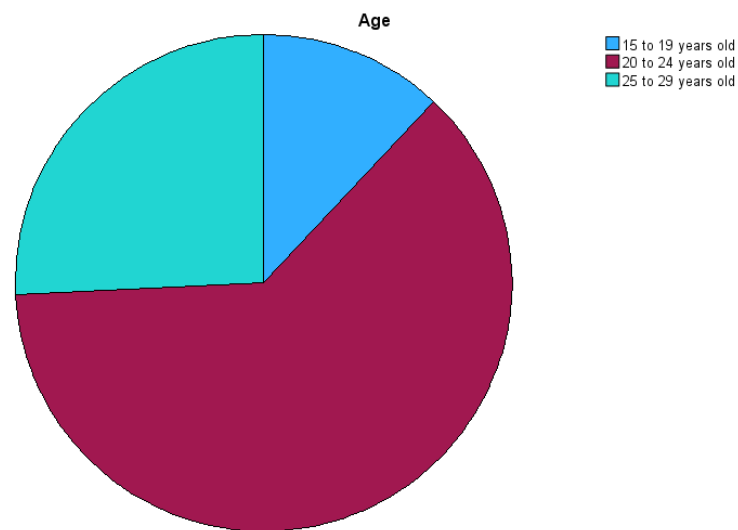


Figure 4.2. Age Group Descriptive Analysis

In addition to gender, respondents were grouped by age group. As shown in Table 4.2 and Figure 4.2, 62.2% (239 respondents) were aged 20 to 24. Next, 26% (100 respondents) were aged 25 to 29. Finally, only 11.7% (45 respondents) were aged 26 to 29.

4.1.1.3 Educational Background

Table 4.3:

Educational Background Descriptive Analysis

Education	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
SPM	97	25.3	97	25.3
UEC	36	9.4	133	34.6
STPM	22	5.7	155	40.4
Diploma	51	13.3	206	53.6
Bachelor's degree	163	42.4	369	96.1
Master's degree	12	3.1	381	99.2
Other	3	0.8	384	100.0

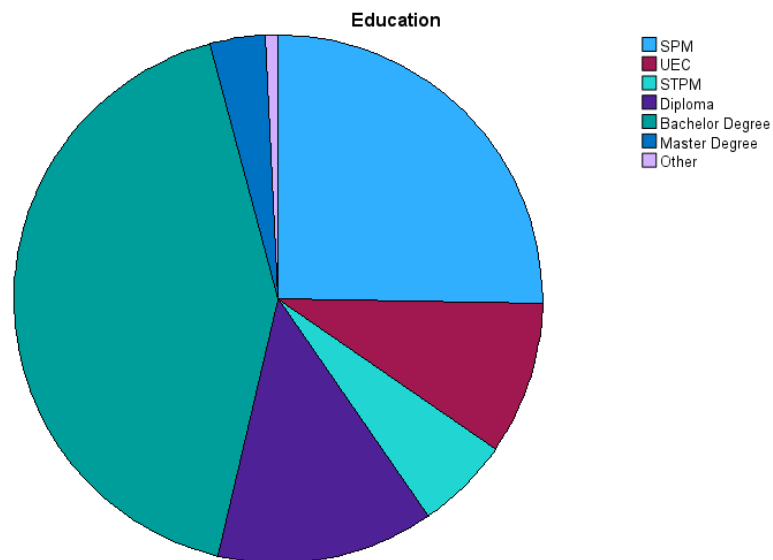


Figure 4.3. Educational Background Descriptive Analysis

Third, respondents were divided into groups according to their level of education. According to Table 4.3 and Figure 4.3, 42.4% (163 respondents) held a bachelor's degree. This was followed by 25.3% (97 respondents) who had completed SPM. In addition, 13.3% (51 respondents) held a diploma.

Meanwhile, 9.4% (36 respondents) held a UEC qualification. Furthermore, 5.7% (22 respondents) held an STPM qualification. A smaller proportion, 3.1% (12 respondents), held a master's degree. Finally, only 0.8% (3 respondents) held qualifications at the SKM3, Matriculation, or Matriculation Program levels.

4.1.1.4 Ethnicity

Table 4.4:

Ethnicity-Specific Descriptive Analysis

Ethnic	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
Chinese	336	87.5	336	87.5
Malay	38	9.9	374	97.4
Indian	10	2.6	384	100

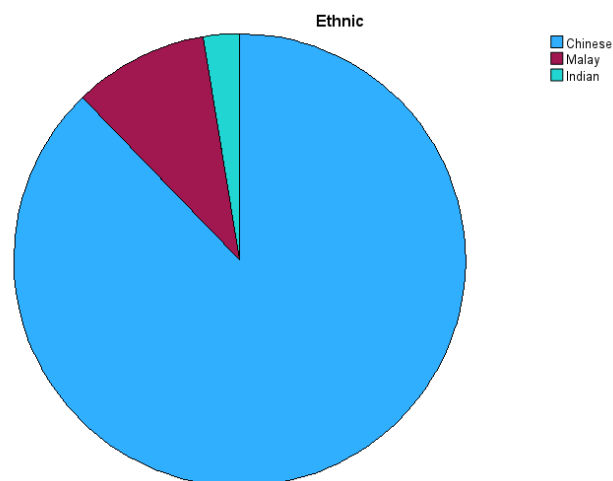


Figure 4.4. Ethnicity-Specific Descriptive Analysis

The third category is ethnicity. According to Table 4.4 and Figure 4.4, participants were categorized into three ethnic groups. Most respondents

were Chinese, accounting for 87.5% (336 respondents) of all participants. Malay respondents constituted 9.9% (38 respondents). The Indian group was the smallest, representing only 2.6% (10 respondents).

4.1.1.4 States

Table 4.5:

State-Specific Descriptive Analysis

State	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
Johor	51	13.3	51	13.3
Kedah	20	5.2	71	18.5
Kelantan	9	2.3	80	20.8
Melaka	7	1.8	87	22.7
Negeri Sembilan	9	2.3	96	25.0
Pahang	9	2.3	105	27.3
Perak	66	17.2	171	44.5
Perlis	1	0.3	172	44.8
Pulau Pinang	122	31.8	294	76.6
Sabah	5	1.3	299	77.9
Sarawak	4	1.0	303	78.9
Selangor	57	14.8	360	93.8
Terengganu	7	1.8	367	95.6
Kuala Lumpur	15	3.9	382	99.5
Putrajaya	2	0.5	384	100.0

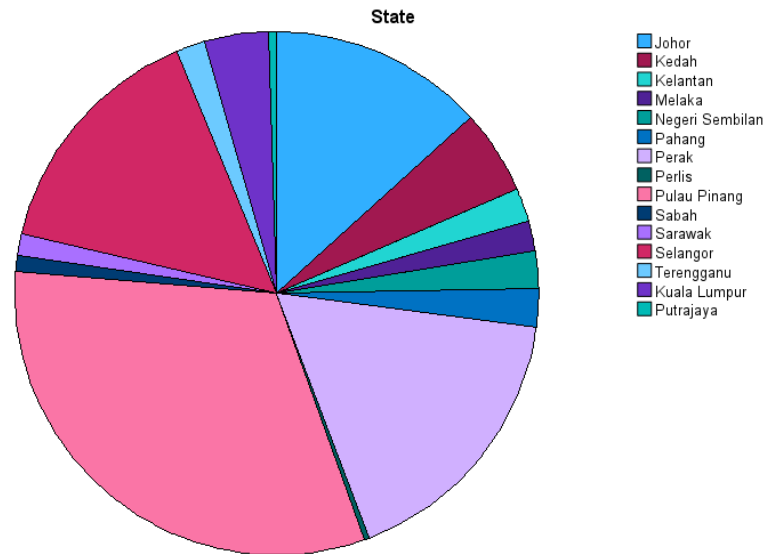


Figure 4.5. State-Specific Descriptive Analysis

Finally, the responders were classified according to their state. Table 4.5 and Figure 4.5 demonstrate that most respondents, 31.8% (122 respondents), were from Pulau Pinang. This was followed by 17.2% (66 respondents) from Perak. Meanwhile, 14.8% (57 respondents) were from Selangor, while 13.3% (51 respondents) were from Johor. In addition, 5.2% (20 respondents) were from Kedah, and 3.9% (15 respondents) were from Kuala Lumpur. Furthermore, for Kelantan, Negeri Sembilan and Pahang accounted for 2.3% (9 respondents) each. Meanwhile, Melaka and Terengganu each represented 1.8% (7 respondents). A smaller proportion of respondents were from Sarawak, Sabah, and Putrajaya, accounting for 1.3% (5 respondents), 1% (4 respondents), and 0.5% (2 respondents), respectively. Finally, the smallest number of respondents were from Perlis, representing only 0.3% (1 respondent).

4.1.2 Constructs' Central Tendency and Dispersion

In the next section, responses to questions on the dependent and independent variables from Sections B, C, D, and E are reviewed. The analysis uses the mean to show the average and the standard deviation to show how spread out the data is. Each variable is analyzed individually.

4.1.2.1 Self-Leadership

Table 4.6:

Central Tendencies: Self-Leadership Assessment

Question	Statement	Sample Size	Mean	Standard Deviation	Mean Ranking	Standard Deviation Ranking
SL1	"I consciously have goals in mind for my work efforts."	384	3.9870	0.77986	4	8
SL2	"I think about my own beliefs and assumptions whenever I encounter a difficult situation."	384	3.9661	0.84049	6	4
SL3	"I establish specific goals for my own performance."	384	3.9792	0.82998	5	5
SL4	"I work toward specific goals I have set for myself."	384	4.0911	0.79458	1	7
SL5	"I make a point to keep track of how well I'm doing at work."	384	3.8776	0.88393	8	2
SL6	"I pay attention to how well I am doing in my work."	384	4.0339	0.87698	3	3

SL7	“I keep track of my progress on projects I’m working on.”	384	4.0807	0.82787	2	6
SL8	“I focus my thinking on the pleasant rather than the unpleasant aspects of my job activities.”	384	3.9219	0.89626	7	1

First, the questions related to Generation Z’s self-leadership were examined. According to Table 4.6, SL4 had the greatest mean value of 4.0911 with a standard deviation of 0.79458. SL7 and SL6 had means of 4.0807 and 4.0339 with standard deviations of 0.82787 and 0.87698, respectively. SL1 had the lowest standard deviation at 0.77986 and the mean at 3.9870. SL7 and SL6 had means of 4.0807 and 4.0339 with standard deviations of 0.82787 and 0.87698, respectively. SL3 and SL2 had mean of 3.9792 and 3.9661 with standard deviations of 0.82998 and 0.84049, respectively. Furthermore, SL8 had the biggest standard deviation of 0.89626 and a mean of 3.9219. Lastly, with a mean of 3.8776 and a standard deviation of 0.88393, SL5 had the lowest value.

4.1.2.2 Self-Awareness

Table 4.7:

Central Tendencies: Self-Awareness Assessment

Question	Statement	Sample Size	Mean	Standard Deviation	Mean Ranking	Standard Deviation Ranking
SA1	“Right now, I am keenly aware of everything in my environment.”	384	3.7839	0.89830	5	4

SA2	“Right now, I am conscious of my feelings.”	384	3.9609	0.88269	1	5
SA3	“Right now, I am concerned about the way I present myself.”	384	3.8281	0.94023	4	2
SA4	“Right now, I am self-conscious about the way I look.”	384	3.7734	0.94949	6	1
SA5	“Right now, I am conscious of what is going on around me.”	384	3.8776	0.84465	3	6
SA6	“Right now, I am aware of my innermost thoughts.”	384	3.8932	0.90923	2	3

Second, the questions related to Generation Z’s self-awareness were examined. Based on Table 4.7, SA2 had the highest mean value of 3.9609, with a standard deviation of 0.88269. This was followed by SA6, which had the second-highest mean of 3.8932 and a standard deviation of 0.90923. SA5, SA3 and SA1 had means of 3.8776, 3.8281 and 3.7839 with standard deviations of 0.84465, 0.94023 and 0.89830, respectively. Finally, SA4 had the lowest mean value of 3.7734 and the highest standard deviation of 0.90923.

4.1.2.3 Empathy

Table 4.8:

Central Tendencies: Empathy Assessment

Question	Statement	Sample Size	Mean	Standard Deviation	Mean Ranking	Standard Deviation Ranking
E1	“Being together with a sad person, I feel sad too.”	384	3.6641	1.07629	5	1
E2	“I sincerely congratulate my successful opponent.”	384	3.9349	0.88411	2	5
E3	“I get angry at the wrongdoer character in a story. ”	384	3.5391	1.06623	6	2
E4	“I do not hesitate to help a harmless animal in hardship.”	384	3.8177	0.95491	4	3
E5	“I try to calm someone who is afraid.”	384	3.9193	0.90617	3	4
E6	“I understand people’s feelings from their behaviour.”	384	4.0156	0.81741	1	6

Thirdly, the questions related to Generation Z’s empathy were examined. Based on Table 4.8, E6 had the highest mean value of 4.0156, with a standard deviation of 0.81741. This was followed by E2, which had the second-highest mean of 3.9349 and a standard deviation of 0.88411. E5, E4 and E1 had means of 3.9193, 3.8177 and 3.6641 with standard deviations of 0.90617, 0.95491 and 1.07629, respectively. Finally, E3 had the lowest mean value of 3.5391, with a standard deviation of 1.06623.

4.1.2.4 Social Skill

Table 4.9:

Central Tendencies: Social Skill Assessment

Question	Statement	Sample Size	Mean	Standard Deviation	Mean Ranking	Standard Deviation Ranking
SS1	"I am good at managing group discussions."	384	3.5521	0.99995	4	3
SS2	"When I encounter a problematic situation, I find a solution by thinking about the problem from different perspectives."	384	3.9297	0.82250	1	6
SS3	"I have difficulties expressing my feelings."	384	3.4557	1.13943	5	2
SS4	"I make eye contact while talking about a topic about myself. "	384	3.8568	0.93541	2	4
SS5	"I avoid sharing information about my field."	384	3.4271	1.14937	6	1
SS6	"In the face of conflict, I submit to the situation and try to adapt."	384	3.8438	0.84986	3	5

The final variable analyzed was social skills. According to Table 4.9, SS2 had the highest mean value of 3.9297 and the smallest standard deviation of 0.82250. This was followed by SS4 in second place, with a mean of 3.8568 and a standard deviation of 0.93541. SS6, SS1 and SL3 had means of 3.8438, 3.5521 and 3.4557 with standard deviations of 0.84986, 0.99995 and

1.13943, respectively. Finally, SS5 had the lowest mean value of 3.4271 and the highest standard deviation of 1.14937.

4.2 Scale Measurement

4.2.1 Reliability Test

Table 4.10:

Cronbach's Alpha Reliability Analysis

No.	Type of the Variable	Nome of the Variable	Number of Items	Cronbach's Alpha	Reliability Test
1	Dependent Variable	Self-Leadership	8	0.872	Good
2	Independent Variable	Self-Awareness	6	0.804	Good
3	Independent Variable	Empathy	6	0.758	Good
4	Independent Variable	Social Skill	6	0.695	Acceptable

The Cronbach's alpha values for each variable are shown in Table 4.10. The dependent variable, self-leadership ($\alpha = 0.872$), shows strong dependability based on the findings. Self-awareness ($\alpha = 0.804$) and empathy ($\alpha = 0.758$), two independent variables, likewise exhibit strong dependability with values between 0.70 and 0.90. In contrast, social skill ($\alpha = 0.695$) lies between 0.70 to 0.80, indicating acceptable reliability. Overall, the measurement scales can be regarded as reliable since all variables have Cronbach's alpha values more than 0.60. As a result, every item is retained for additional analysis.

4.3 Preliminary Data Screening

Prior to the inferential analysis, preliminary data analysis was done to ensure the results were trustworthy. The multicollinearity test and the normality test were the two tests that were carried out.

4.3.1 Multicollinearity Test

Multicollinearity referred to a situation in regression analysis where two or more independent variables were highly correlated (Azid et al., 2024). If this issue existed in the model, the error term would rise, rendering the results untrustworthy. Two techniques were employed in this study to identify the multicollinearity issue: the tolerance value and the variance inflation factor (VIF). A high multicollinearity issue was highlighted if the tolerance value was less than 0.1 and the VIF was greater than 10 (Gurung, 2024).

Table 4.11:

Tolerance Value and Variance Inflation Factor (VIF)

Independent Variables	Collinearity Statics	
	Tolerance	VIF
Self-Awareness	0.664	1.505
Empathy	0.602	1.660
Social Skill	0.586	1.708

Table 4.11 shows that the VIF values for each independent variable were less than 10. Furthermore, their tolerance levels exceeded 0.1. Consequently, it can be said that the independent variables did not have a multicollinearity issue.

Table 4.12:

Normality Test Result

Variables	Skewness	Kurtosis
DV: Self-Leadership	(0.819)	1.711
IV 1: Self-Awareness	(0.309)	0.046
IV 2: Empathy	(0.411)	0.466
IV 3: Social Skill	(0.047)	0.119

First, skewness and kurtosis were examined to see whether the data was normal. According to Kim (2013), if skewness was between ± 2 and kurtosis was between ± 7 , the data were deemed normally distributed when the sample size exceeded 300. All skewness met the required criteria, with the highest skewness observed in social skill at -0.047 and the lowest in self-leadership at -0.819. For kurtosis, all values are also within the acceptable range, self-leadership shows the highest kurtosis value of 1.711, while self-awareness has the lowest at 0.046. Based on these criteria, the results suggested that the data in this study were normally distributed.

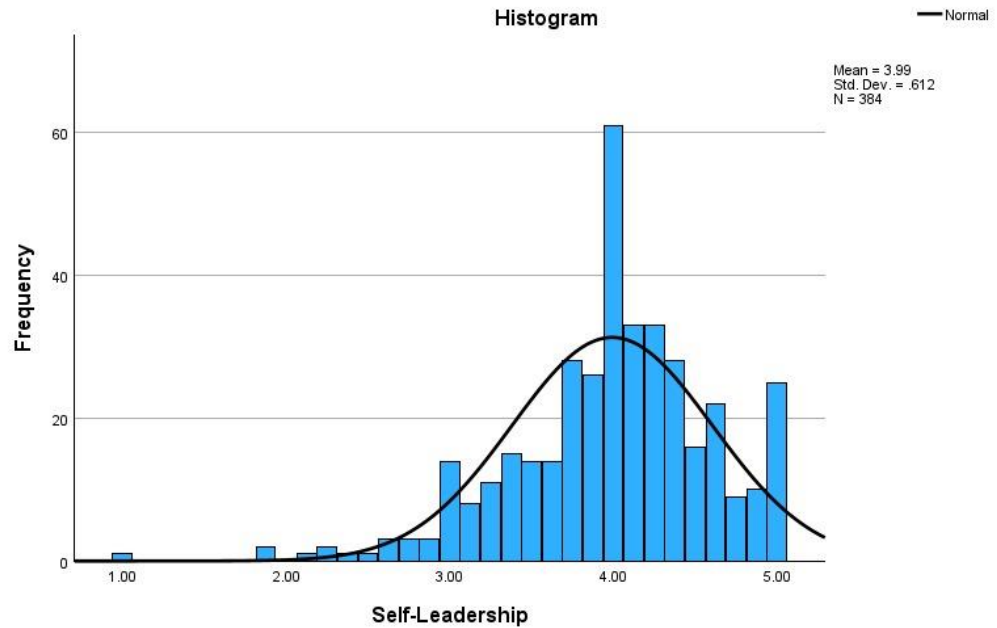


Figure 4.6. Histogram

Second, the self-leadership histogram for Generation Z is displayed in Figure 4.6. The data distribution is presented in this histogram, and a normal distribution curve is placed on top. From the figure, most of the data are clustered around the mean ($M = 3.99$, $SD = 0.612$, $N = 384$), with the highest frequency in the middle and fewer values toward both ends. Although there are some small deviations, the overall shape still looks quite similar to a bell curve. So, the data can be considered normally distributed.

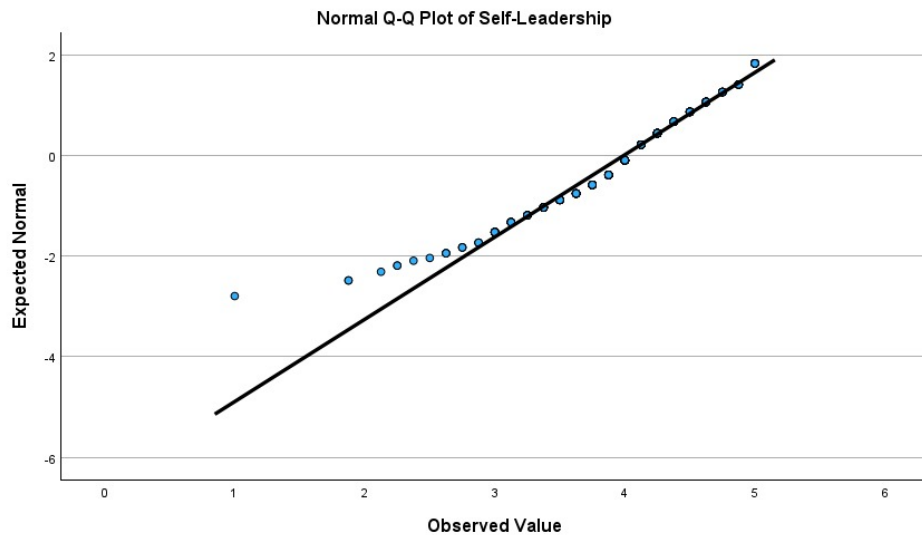


Figure 4.7. Normal Q-Q plot

Thirdly, a type of Normal Q-Q Plot to visually check if the data follows a normal distribution. Basically, this plot compares our actual collected data (on the X-axis) against what a perfect normal distribution should look like (on the Y-axis). If the data is normal, the points should align closely with the diagonal line show a clear straight line (Varadan, 2024). Based on Figure 4.7, the majority of the data points for Self-Leadership are lined up very closely to the diagonal line. Although there are a few “outliers” on the left side of the chart that deviate from this line, the overall trend still forms a very clear straight line. Because most of the dots stay so close to the path, it concludes that the data is normally distributed and ready for further analysis.

4.4 Inferential Analysis

4.4.1 Multiple Regression Analysis

Table 4.13:

Multiple Regression Analysis

	Unstandardized Coefficient Beta	Coefficient Std. Error	Standardized Coefficient Beta	t-statistics	P-value
(Constant)	1.031	0.166		6.201	<0.001
Self-Awareness	0.310	0.044	0.326	7.056	<0.001
Empathy	0.202	0.046	0.212	4.369	<0.001
Social Skill	0.045	0.008	0.276	5.613	<0.001
R-squared					0.461
Adjusted R-squared					0.457
F-test					108.289
P-value					0.000

In this study, the relationship between the three independent variables, Self-Awareness (AS), Empathy(E), and Social Skill (SS), relate to Self-Leadership (SL) among Generation Z. According to Table 4.13, all three variables have a significant impact on Self-Leadership. Specifically, Self-Awareness, Empathy, and Social Skill are statistically significant, with t-values of 7.056, 4.369, and 5.613 respectively. The p-values for all three predictors are below 0.001, which is much lower than the standard 0.05 level.

The results for the first independent variable, self-awareness, show a p-value well below 0.001, indicating that its significance can be confirmed at a 99% confidence level. This finding is consistent with the conclusions of Bracht et al. (2021). This finding aligns with the expectations of this study, namely

that there is a significant association between self-awareness and self-leadership among Generation Z youth. Additionally, the unstandardized regression coefficient is 0.310 and positive, meaning that among Malaysian Generation Z youth, a one-unit rise in self-awareness is linked to a 0.310-unit increase in self-leadership, all other things being equal.

Next, the results for the second independent variable, Empathy, show that the p-value for this variable was well below 0.001, indicating that its significance could be confirmed at a 99% confidence level. This result was consistent with the conclusions of Sudiar et al. (2025) and aligned with the expectations of this study, which suggested a significant association between Empathy and self-leadership among Generation Z youth. In addition, the unstandardized regression coefficient was 0.202 and positive, indicating that, with all other variables held constant, a one-unit increase in Empathy was associated with a 0.202-unit increase in self-leadership among Malaysian Generation Z youth.

The results for the final independent variable in this study, Social Skill, show that the p-value for this variable is significantly less than 0.001, indicating that its significance can be confirmed at a 99% confidence level. This finding is consistent with the conclusions of Kim and Kim (2024). The result aligns with the expectations of this study, namely that there is a significant association between Social Skill and self-leadership. Additionally, a one-unit improvement in social skill is linked to a 0.045-unit rise in self-leadership when all other factors are held constant, according to the positive unstandardized regression coefficient of 0.045.

Additionally, R^2 , usually referred to as the coefficient of determination, was the most commonly used statistic in linear regression. R^2 indicated the proportion of the dependent variable's variance that could be accounted for by the independent variables (Gao, 2024). The combined variation in self-

awareness, empathy, and social skills accounts for 46.1% of the variation in self-leadership, according to an R^2 value of 0.461. Other pertinent factors account for 53.9% of the variance across Malaysia's Generation Z.

Besides, the adjusted R^2 value is 0.457. This shows that the three independent factors combined account for 45.7% of the variance in the dependent variable after controlling the number of independent variables.

Next, the F-statistic for the overall model is 108.289, and the p-value of the F-test is zero, which is below the significance level of 0.001. The relationship between the three independent factors and the dependent variable is so clearly demonstrated by this model.

4.5 Conclusion

This study uses SPSS 31.0 to arrange and examine the data collected from 384 respondents. The findings show that there are no problems with multicollinearity or non-normality in the data and that the questionnaire scales are trustworthy. In conclusion, the results of the multiple regression analysis show that the three independent variables of self-awareness, empathy, and social skills have a significant impact on Gen Z's self-leadership.

Chapter 5: Discussion and Conclusion

5.0 Introduction

The results from Chapter 4 are thoroughly discussed in this chapter. The statistical results are first summarized to provide a general understanding of the relationships between the dependent variable, self-leadership, and the independent variables, self-awareness, empathy, and social skills. The main conclusions are then examined considering earlier research. Additionally, the study's implications are highlighted to show how it contributes to both academic and practical fields. To direct future research, the study's limitations and suggestions are finally discussed.

5.1 Summary of Statistical Analysis

Table 5.1:

Summary of the Statistical Findings

Independent Variables	T - Statistic	P - value	Results
Self-Awareness	7.056	<0.001	Significant
Empathy	4.369	<0.001	Significant
Social Skill	5.613	<0.001	Significant

Based on Table 5.1, all three independent variables, self-awareness, empathy, and social skills, showed significant relationships with self-leadership among

Generation Z in Malaysia. Therefore, all three variables were strong predictors of self-leadership for Malaysia's Generation Z.

5.2 Discussion on Major Findings

In this section, the major findings are analysed in detail. The discussion focuses on why these results were obtained, connecting them to the unique characteristics of Generation Z and the context of Malaysia.

5.2.1 The Relationship between Self-Awareness and Self-Leadership among Generation Z in Malaysia.

The inferential analysis's findings indicate that among Malaysia's Generation Z, self-awareness and self-leadership are significantly related. The results of Welbeck et al. (2025), Toh et al. (2022), Kwartawaty et al. (2024), and Bracht et al. (2021) are comparable to this. These findings indicate that self-awareness plays an important role in strengthening leadership capability.

A key factor behind this outcome may lie in Malaysia's educational environment. Gen Z has been exposed to various development programs from a young age. During secondary school, schools organize leadership camps, tutoring sessions, and the Myers-Briggs Type Indicator (MBTI) personality test, which emphasizes self-awareness. These experiences encourage Gen Z to assess their emotions, strengths, and weaknesses, thereby directly fostering the development of self-awareness. Consequently,

when they enter college or the workforce, self-awareness can influence their self-leadership. At the higher education level, institutions such as Universiti Tunku Abdul Rahman (UTAR) further reinforce Gen Z's self-awareness and personal growth through public lectures. By enhancing their ability to effectively manage themselves, these initiatives help prepare them for their future careers. Consequently, the significant relationship identified in this study can be attributed to Gen Z's continuous exposure to structured self-development opportunities throughout their educational journey.

5.2.2 The Relationship between Empathy and Self-Leadership among Generation Z in Malaysia.

Previous studies also provided strong evidence that empathy and leadership were closely related. According to Lee and Jung (2022), empathy enhanced interpersonal comprehension and emotional control, which had a positive impact on self-leadership. In a similar vein, Sudiar et al. (2025) found that empathy improved relationships and communication, which greatly increased leadership effectiveness. Rahman and Castelli (2013) found that empathy, as a component of emotional intelligence, positively contributed to individuals' interpersonal effectiveness and overall performance, supporting the development of self-leadership. These results demonstrated the significance of empathy in the development of leadership.

One key explanation for this finding can be linked to Malaysia's cultural context. Malaysian society generally emphasizes values such as mutual respect, collectivism, and caring for others. From a young age, children are taught to be considerate of others, willing to help, and attuned to the needs of those around them. Growing up in such an environment, Gen Z naturally absorbs the influence of their parents and surroundings, thereby developing empathetic behavioural habits. Additionally, within the Malaysian education

system, students are frequently encouraged or required to participate in service-oriented activities, such as volunteering at orphanages, visiting nursing homes, and engaging in community support projects. Organizations like the Leo Club provide Gen Z with opportunities to actively help others. Through these experiences, students are exposed to diverse social contexts, which helps Gen Z understand the feelings and needs of others. At the university level, institutions like Universiti Tunku Abdul Rahman (UTAR) also offer community service programs to deepen students' empathy. Furthermore, many organizations have peer mentoring programs. When people possess empathy, they can better understand others' feelings and provide appropriate support, which also helps enhance their self-leadership. Overall, the empathy of Malaysia's Generation Z may be linked to their cultural and educational backgrounds. Since they have been nurtured to care for others from a young age, empathy has naturally become integrated into their way of thinking and behaving. This also explains the significant relationship between empathy and self-leadership found in this study.

5.2.3 The Relationship between Social Skill and Self-Leadership among Generation Z in Malaysia.

Social skills and leadership effectiveness are significantly correlated, according to prior research. According to Kim & Kim (2024), interpersonal and communication abilities greatly improve individual performance and self-leadership. According to Gamotin et al. (2025), pupils who possess good social skills also typically exhibit stronger leadership abilities. Furthermore, Kim and Sim (2020) found that communication competence significantly influences self-leadership through its relationship with self-efficacy and performance. Not only that, Kim et al. (2025) also found that communication ability significantly enhances self-leadership and influences

individuals' work-related behaviours. These results imply that social skills are necessary for successful leadership.

In Malaysia's education system, students are required to participate regularly in group discussions, informal gatherings, school projects, and team activities. Whether in secondary school or university, these experiences encourage students to collaborate, share ideas, and solve problems together. As a result, through repeated participation in these activities, Gen Z students may find it easier to express their ideas and work with others, which helps build social confidence and leadership skills. Equipping Gen Z with stronger social skills not only enhances their ability to navigate interpersonal interactions but also helps them regulate their own behaviour and take initiative, all of which are key elements of self-leadership. In summary, research findings indicate that social skills play a significant role in enhancing self-leadership, as these skills are continuously developed through collaborative learning environments in Malaysia.

5.3 Implications of the Study

Based on the findings of the data analysis, this section concentrated on the steps that universities, businesses, government agencies, and social groups should do to improve self-leadership.

The findings of the multiple regression analysis show that the first independent variable, self-awareness, has a considerable impact on self-leadership. Self-awareness is crucial because it helps people recognize their feelings, strengths, and shortcomings, which promotes independence, self-control, and goal setting and serves as the cornerstone of self-leadership. Therefore, many institutions, especially educational institutions, could be crucial in helping students become more self-

aware to improve self-leadership among Malaysia's Generation Z. Activities that encourage introspection and self-awareness could be included into educational institutions at all levels, including primary, secondary, and university. For example, universities could organize workshops and seminars that focus on personal development and self-reflection, such as guided journaling, mindfulness sessions, and personality assessments like the Myers-Briggs Type Indicator (MBTI). Additionally, educators like lecture should incorporate reflective learning activities like personal development portfolios and reflective essays into the classroom. In addition, participation in faculty-based organizations, leadership societies, and student representative councils in Malaysian universities may encourage students to consider their responsibilities and behaviours. These methods increase the likelihood that students will become more self-aware, which strengthens their capacity for self-leadership.

From a government perspective, Malaysian policymakers might promote the integration of self-development and reflective learning within the national education system. For example, at the primary and secondary school levels, the Ministry of Education may implement courses on emotional awareness and personal development. This may ensure that students start growing self-awareness at a young age, encouraging the development of long-term self-leadership. Furthermore, the government could provide training programmes for teachers to ensure that they are well-prepared to help students via reflective practices and personal development. Journaling, goal-setting exercises, and classroom discussions that develop self-awareness could all be encouraged in schools. Furthermore, national education policy might emphasize the value of personal growth in addition to academic performance, resulting in a more balanced student development.

Empathy, as the second independent variable, also shows a significant relationship with self-leadership. Empathy is important because it allows people to comprehend the feelings and viewpoints of others, which promotes emotional control and responsible decision-making—two skills necessary for self-leadership. More

possibilities for experiential learning that expose students to real-life social issues could be offered by educational institutions to enhance empathy among Malaysia's Generation Z.

Through a variety of programs, universities and educational institutions play a critical role in fostering empathy. Educational institutions give students the chance to develop a greater knowledge of a variety of emotions and difficulties by planning volunteer and community service projects that interact with impoverished populations, the elderly, and people with disabilities. Additionally, by encouraging kids to think about multiple perspectives, activities like role-playing games, group debates, and peer mentorship can improve emotional awareness. Other empathy-focused efforts, like outreach programs, charitable events, and social responsibility projects in Malaysia, help students become more socially conscious and develop their capacity for self-leadership.

The government might use community efforts and national youth programs to foster empathy among Malaysian kids. This could entail distributing funds to assist youth service initiatives, volunteer campaigns, and school-based initiatives that promote engagement with various social groups. Working together with educational institutions and non-governmental organizations could facilitate the creation of structured programs that promote civic engagement, cultural awareness, and social inclusion. Public awareness initiatives that support empathy, solidarity, and respect for one another may also strengthen compassionate actions. A continual emphasis on social and emotional growth in addition to academic achievement would be ensured by incorporating empathy-focused components into national education programs and extracurricular activities.

The third independent variable, social skills, was also found to have a significant influence on self-leadership. Social skills are crucial because they allow people to communicate successfully, work with others, and gain confidence in social situations, all of which contribute to self-leadership. As a result, Malaysian

educational institutions may focus on giving students additional opportunities to develop and perfect their social skills.

Universities can enhance students' social competence and self-leadership by encouraging participation in extracurricular activities like debate clubs, and drama societies. These platforms encourage important abilities like public speaking, teamwork, and problem-solving in a supportive environment. Additionally, classroom activities such as group assignments and presentations help to improve communication and interpersonal skills. Institutions may also introduce structured activities, such as communication seminars and collaborative learning sessions, to ensure ongoing exposure and practice. This proactive approach boosts students' confidence and improves their capacity to communicate effectively with others.

From a government perspective, Malaysian policymakers can encourage the development of soft skills by incorporating communication and collaborative activities into national school curricula. Government programs can improve awareness of the importance of interpersonal skills among young people. Collaborations with educational institutions and industry partners could lead to the development of training programs, workshops, and internships that provide hands-on experience in communication and teamwork. Introducing national competitions, leadership camps, and youth exchange programs would allow pupils to strengthen their social and collaborative skills. Furthermore, support for extracurricular activities such as debate clubs, public speaking efforts, and group projects can boost students' self-esteem and communication skills. A continual evaluation process is required to ensure that these programs remain aligned with the changing needs of society and the workforce.

5.4 Study Limitations

A couple of the study's limitations are listed in this section. First, Malaysian members of Generation Z are the study's primary focus. This is due to the fact that Generation Z is a representation of the upcoming workforce and future leaders who must deal with particular issues including work-life balance, digitization, and professional aspirations. However, it is important to note that the current workforce also includes Generation X and Generation Y, who may possess different characteristics, experiences, and approaches to self-leadership. The results may not accurately represent how self-leadership differs throughout Malaysia's larger workforce because this study does not include comparisons across generations.

Next, investigate the relationship between the independent variables and the dependent variable, this study was quantitative in nature and used questionnaires to gather data. Because it was a favoured method for learning about respondents' opinions, social characteristics, and behaviours, the survey questionnaire was employed. It also made it possible to gather a lot of data more effectively. Additionally, it guaranteed participant confidentiality and allowed comparisons between responses. However, using the survey form made it difficult to completely understand the respondents' thoughts.

Finally, only three independent variables self-awareness, empathy, and social skills, are examined in this study to determine how they directly relate to self-leadership. These factors were picked because they have a strong connection to self-management, interaction, and personal behaviour, all of which are crucial elements of self-leadership. However, other possible impacting elements including motivation, psychological capital, and self-efficacy are not considered in this study. As a result, the results might not offer a thorough explanation of every element affecting self-leadership.

5.5 Recommendations for Future Research

Considering the constraints, several avenues for future investigation are suggested to enhance our comprehension of self-leadership in Generation Z. The first suggestion is that future researchers should broaden the range of respondents by incorporating not only Generation Z but also other Malaysian generations like Generation X and Generation Y. This would allow for comparisons across generations and provide a clearer understanding of how self-leadership differs based on age, experience, and career stage. These comparisons could be used to ascertain whether the associations found in this study hold true for various generations of Malaysian workers.

The second recommendation was that future scholars conduct their studies using qualitative research techniques. For instance, data regarding the elements influencing self-leadership among Generation Z can be gathered using qualitative research methods like focus groups and in-person interviews. Future studies may also employ a mixed method, which blends quantitative and qualitative approaches. Future studies may be able to better comprehend the viewpoints of the respondents and pinpoint the underlying causes of the factors influencing self-leadership as a result.

The third recommendation is that more variables related to self-leadership should be included in future research. For instance, researchers could include additional factors like motivation, self-efficacy, or personality traits. To better understand how various factors interact to influence self-leadership, future research could also examine the function of mediating and moderating variables, such as gender, academic background, or work experience. This could offer a more thorough and comprehensive knowledge of the evolution of self-leadership.

5.6 Conclusion

In conclusion, this study demonstrates that self-awareness, empathy, and social skills have significant positive relationships with self-leadership among Generation Z in Malaysia. The findings contribute to both theoretical and practical knowledge by providing evidence that self-awareness, empathy and social skill is improve leadership training programs and offering valuable insights for educators and organizations to enhance leadership training programs. Notwithstanding its shortcomings, the study offers a solid basis for further investigation and emphasises the necessity of ongoing investigation of emotional intelligence and leadership in various settings.

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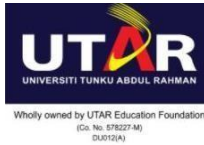
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APPENDIX 1.1: SURVEY QUESTIONNAIRE



UNIVERSITI TUNKU ABDUL RAHMAN
Faculty of Business and Finance

TOPIC: The impact on self-awareness, empathy, and social skill on the self leadership among Generations Z in Malaysia

Dear respondents,

We are students of Bachelor Of Business Administration (Honours) from Universiti Tunku Abdul Rahman (UTAR). The purpose of this study is to examine the impact on self-awareness, empathy, and social skill on the self-leadership among Generations Z in Malaysia. This study can help academics and researchers to know more about the impact of self-awareness, empathy, and social skill on self-leadership among Generations Z in Malaysia.

There are **FIVE** (5) sections in this questionnaire. Section A is on demographics. Section B, C, D, and E cover all of the variables in this study. Please read the instructions carefully before answering the questions. Please answer ALL questions in ALL sections. Completion of this questionnaire will take you approximately 10 minutes.

Your participation in this study is entirely voluntary. There will be no disadvantage if you decide not to complete the attached anonymous questionnaire. You can withdraw at any time without any penalty. You can refuse to answer any question at any time if you feel uncomfortable.

The information collected from you will be kept strictly private and confidential. All responses and findings will be used solely for academic purposes.

Your assistance in completing this questionnaire is very much appreciated. Thank you for your participation. If you have any question regarding to this questionnaire, you may contact us at 016-4384022 (Lee Yan) or 011-26332650 (Loo Xin Yu).

If you decide to complete this attached anonymous questionnaire, this will be taken as you voluntarily agree and formal consent to participate in this study. Thank you very much for your cooperation and willingness to participate in this study.

Yours sincerely,
LEE YAN 23ABB01204
LOO XIN YU 21ABB04466

PERSONAL DATA PROTECTION NOTICE

Please be informed that 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.

1. Personal data refers to any information which may directly or indirectly identify a person which could include sensitive personal data and expression of opinion. Among others it includes: Name, identity card, place of birth, address, education history, employment history, medical history, blood type, race, religion, photo, personal information and associated research data.
2. The purposes for which your personal data may be used are inclusive but not limited to:
 - a) For assessment of any application to UTAR
 - b) For processing any benefits and services
 - c) For communication purposes
 - d) For advertorial and news
 - e) For general administration and record purposes
 - f) For enhancing the value of education
 - g) For educational and related purposes consequential to UTAR
 - h) For replying any responds to complaints and enquiries
 - i) For the purpose of our corporate governance
 - j) For the purposes of conducting research/ collaboration
3. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.
4. 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.
5. 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:

1. By submitting or providing your personal data to UTAR, you had consented and agreed for your personal data to be used in accordance to the terms and conditions in the Notice and our relevant policy.
2. If you do not consent or subsequently withdraw your consent to the processing

and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.

3. You may access and update your personal data by writing to us at 1bc31e5529l@1utar.my.

Acknowledgment of Notice

☐ I have been notified and that I hereby understood, consented and agreed per UTAR above notice.

☐ I disagree; my personal data will not be processed.

.....

Name:

Date:

Section A: Demographic Profile

Please place a tick “√” for each of the following:

1. Gender:

- ☐ Male
- ☐ Female

2. Age:

- ☐ 15 to 19years old
- ☐ 20 to 24 years old
- ☐ 25 to 29 years old

3. Highest education completed:

- ☐ SPM
- ☐ UEC
- ☐ STPM
- ☐ Diploma
- ☐ Bachelor Degree
- ☐ Master Degree
- ☐ Others, please specify_____

4. Ethnic group:

- ☐ Chinese
- ☐ Malay
- ☐ Indian
- ☐ Others, please specify_____

5. States

- ☐ Johor
- ☐ Kedah
- ☐ Kelantan
- ☐ Melaka
- ☐ Negeri Sembilan
- ☐ Pahang

- ▯ Perak
- ▯ Perlis
- ▯ Pulau Pinang
- ▯ Sabah
- ▯ Sarawak
- ▯ Selangor
- ▯ Terengganu
- ▯ Kuala Lumpur
- ▯ Labuan
- ▯ Putrajaya

Section B: Self-leadership

Based on your experience, please circle the most appropriate option that best indicate your agreement level about the following statements.

Level of agreement

1 - Strongly disagree;

2 - Disagree;

3 - Neutral;

4 - Agree;

5 - Strongly agree;

No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I consciously have goals in mind for my work efforts.	1	2	3	4	5
2	I think about my own beliefs and assumptions whenever I encounter a difficult situation.	1	2	3	4	5
3	I establish specific goals for my own performance.	1	2	3	4	5
4	I work toward specific goals I have set for myself.	1	2	3	4	5
5	I make a point to keep track of how well I'm doing at work.	1	2	3	4	5
6	I pay attention to how well I am doing in my work.	1	2	3	4	5
7	I keep track of my progress on projects I'm working on.	1	2	3	4	5
8	I focus my thinking on the pleasant rather than the unpleasant aspects of my job activities.	1	2	3	4	5

Section C: Self-awareness

Based on your experience, please circle the most appropriate option that best indicate your agreement level with the following statements.

Level of agreement

- 1 - Strongly disagree;**
- 2 - Disagree;**
- 3 - Neutral;**
- 4 - Agree;**
- 5 - Strongly agree;**

No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Right now, I am keenly aware of everything in my environment.	1	2	3	4	5
2	Right now, I am conscious of my feelings.	1	2	3	4	5
3	Right now, I am concerned about the way I present myself.	1	2	3	4	5
4	Right now, I am self-conscious about the way I look.	1	2	3	4	5
5	Right now, I am conscious of what is going on around me.	1	2	3	4	5
6	Right now, I am aware of my innermost thoughts.	1	2	3	4	5

Section D: Empathy

Based on your experience, please circle the most appropriate option that best indicate your agreement level about the following statements.

Level of agreement

- 1 - Strongly disagree;**
- 2 - Disagree;**
- 3 - Neutral;**
- 4 - Agree;**
- 5 - Strongly agree;**

No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Being together with a sad person, I feel sad too.	1	2	3	4	5
2	I sincerely congratulate my successful opponent.	1	2	3	4	5
3	I get angry at the wrongdoer character in a story.	1	2	3	4	5
4	I do not hesitate to help a harmless animal in hardship.	1	2	3	4	5
5	I try to calm someone who is afraid.	1	2	3	4	5
6	I understand people's feelings from their behavior.	1	2	3	4	5

Section E: Social skills

Based on your experience, please circle the most appropriate option that best indicate your agreement level about the following statements.

Level of agreement

1 - Strongly disagree;

2 - Disagree;

3 - Neutral;

4 - Agree;

5 - Strongly agree;

No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I am good at managing group discussions.	1	2	3	4	5
2	When I encounter a problematic situation, I find a solution by thinking about the problem from different perspectives.	1	2	3	4	5
3	I have difficulties expressing my feelings.	1	2	3	4	5
4	I make eye contact while talking about a topic about myself.	1	2	3	4	5
5	I avoid sharing information about my field.	1	2	3	4	5
6	In the face of conflict, I submit to the situation and try to adapt.	1	2	3	4	5

Thank you for your participation.

**APPENDIX 1.2: TABLE FOR DETERMINING SAMPLE SIZE
FROM A GIVEN POPULATION**

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

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

APPENDIX 1.3: RELIABILITY TEST ANALYSIS RESULTS FOR PILOT TEST

Scale: Self-Leadership

Case Processing Summary			
		N	%
Cases	Valid	30	100.0
	Excluded ^a	0	.0
	Total	30	100.0
a. Listwise deletion based on all variables in the procedure.			
Reliability Statistics			
Cronbach's Alpha		N of Items	
.863		8	

Scale: Self-Awareness

Case Processing Summary			
		N	%
Cases	Valid	30	100.0
	Excluded ^a	0	.0
	Total	30	100.0
a. Listwise deletion based on all variables in the procedure.			
Reliability Statistics			
Cronbach's Alpha		N of Items	
.863		8	

Scale: Empathy**Case Processing Summary**

		N	%
Cases	Valid	30	100.0
	Excluded ^a	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.852	6

Scale: Social Skill**Case Processing Summary**

		N	%
Cases	Valid	30	100.0
	Excluded ^a	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.823	6

APPENDIX 1.4: RELIABILITY TEST ANALYSIS RESULTS FOR FULL TEST

Scale: Self-Leadership

Case Processing Summary			
		N	%
Cases	Valid	384	100.0
	Excluded ^a	0	.0
	Total	384	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.872	.873	8

Scale: Self-Awareness

Case Processing Summary			
		N	%
Cases	Valid	384	100.0
	Excluded ^a	0	.0
	Total	384	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.804	.805	6

Scale: Empathy

Case Processing Summary			
		N	%
Cases	Valid	384	100.0
	Excluded ^a	0	.0
	Total	384	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.758	.763	6

Scale: Social Skill

Case Processing Summary			
		N	%
Cases	Valid	384	100.0
	Excluded ^a	0	.0
	Total	384	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.695	.706	6

APPENDIX 1.5: MULTIPLE LINEAR REGRESSION ANALYSIS RESULTS

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.679 ^a	.461	.457	.45092

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	66.055	3	22.018	108.289	<.001 ^b
	Residual	77.265	380	.203		
	Total	143.320	383			

a. Dependent Variable: Self-Leadership

b. Predictors: (Constant), SocialSkill, Self-Awareness, Empathy

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.031	.166		6.201	<.001
	Self-Awareness	.310	.044	.326	7.056	<.001
	Empathy	.202	.046	.212	4.369	<.001
	SocialSkill	.045	.008	.276	5.613	<.001