

The Relationship Between Assertiveness, Social Skills, And Psychological Well-Being Among Public University Students in Malaysia

ABSTRACT

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Received: 31/12/2025 |
First Revision: 14/1/2026 |
Second Revision: 15/4/2026 |
Accepted: 15/5/2026

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APA citation for this article:

This study examined the relationships between assertiveness, social skills, and psychological well-being, as well as the predictive contributions of assertiveness and social skills to psychological well-being among first-year undergraduate students in Malaysian public universities. A cross-sectional correlational research design was employed, and data were collected from 1,206 students using a multi-stage sampling procedure. Three established instruments were used, namely the Rathus Assertiveness Schedule (RAS), the Social Skills Inventory (SSI-Del-Prette), and Ryff's Psychological Well-Being Scale. The instruments demonstrated strong internal consistency, with Cronbach's alpha values of .93, .94, and .88, respectively. The findings indicated that assertiveness ($r = .259, p < .001$) and social skills ($r = .344, p < .001$) were significantly and positively associated with psychological well-being. In addition, multiple regression analysis showed that both assertiveness ($\beta = .192, p < .001$) and social skills ($\beta = .301, p < .001$) significantly predicted psychological well-being, explaining 15.3% of the variance. Hierarchical regression analysis further revealed that these relationships remained significant after controlling for demographic variables, which were not significant predictors. Overall, the findings suggest that interpersonal competencies, particularly social skills and assertiveness, are important factors associated with students' psychological well-being. These results have practical implications for higher education institutions, highlighting the importance of developing programmes that enhance students' interpersonal and social-emotional competencies to support their psychological well-being.

Keywords: Assertiveness, Social Skills, Psychological Well-Being, University Students, Regression Analysis, Malaysia

1. Introduction

University students experience a critical period of transition characterised by increased academic demands, social adjustment, and the development of personal identity. During this phase, students are required to adapt to new learning environments, establish interpersonal relationships, and manage expectations related to academic performance and future careers. These challenges may influence students' emotional functioning, coping abilities, and overall psychological well-being (Keyes, 2005; Ryff, 2014). Psychological well-being has become an important focus in higher education research, as it reflects positive functioning, life satisfaction, and the ability to manage stress effectively (Ryff, 1989). Students with higher psychological well-being tend to demonstrate greater resilience, emotional stability, and adaptive coping in response to academic and social pressures. However, beyond the examination of psychological distress, there is an increasing need to explore positive psychosocial competencies that are associated with students' well-being and overall functioning.

Among these competencies, assertiveness and social skills are considered important for interpersonal and emotional functioning. Assertiveness refers to the ability to express thoughts, needs, and emotions confidently and respectfully without violating the rights of others (Rathus, 1973). Students who are more assertive may be better able to communicate effectively and navigate social interactions. Similarly, social skills including coping and self-assertion with risk, self-assertion in expressing positive affect, conversation and social confidence, self-exposure to strangers and new situations, and self-control of aggressiveness are associated with social adjustment, peer acceptance, and psychological functioning (Del Prette & Del Prette, 2005). Previous research has reported that assertiveness and social skills are positively associated with interpersonal relationships, adaptive coping, and mental health outcomes among students (Habib & Ahmad, 2024; Ibrahim, 2023). In addition, psychological well-being has been linked to academic engagement, self-esteem, and emotional resilience (Keyes, 2005; Diener et al., 2018). However, most existing studies have focused on psychological distress rather than positive well-being, particularly within the Malaysian higher education context (Chelvarayan et al., 2023; Mohamad et al., 2024).

Furthermore, empirical evidence examining the combined associations of assertiveness and social skills with psychological well-being remains limited. Given this gap, there is a need to better understand how these psychosocial variables are related to psychological well-being among university students. Accordingly, this study aims (i) examine the relationships between assertiveness, social skills, and psychological well-being; (ii) determine whether assertiveness and social skills significantly predict psychological well-being; and (iii) examine whether these relationships remain significant after controlling for demographic variables, namely gender, field of study, and socioeconomic status, among students in Malaysian public universities. The findings are expected to provide empirical evidence to inform future research and support the development of student support initiatives in higher education settings.

2. Research Hypotheses

Based on the objectives of the study and the theoretical considerations discussed in the literature, a set of hypotheses was formulated to empirically examine the relationships and predictive contributions among the study variables. Given the cross-sectional design, the hypotheses are framed to test statistical relationships and predictive associations rather than causal effects. Specifically, the hypotheses address (i) the relationships between assertiveness, social skills, and psychological well-being, and (ii) the extent to which assertiveness and social skills contribute to the prediction of psychological well-being, both independently and after controlling for demographic variables.

1. H_{a1} : There is a significant relationship between assertiveness and psychological well-being.
2. H_{a2} : There is a significant relationship between social skills and psychological well-being.
3. H_{a3} : Assertiveness and social skills significantly predict psychological well-being.

4. H_a: Assertiveness and social skills significantly predict psychological well-being after controlling for demographic variables.

3. Literature Review

3.1. Assertiveness and Psychological Well-Being

Assertiveness is commonly defined as the ability to express one's thoughts, feelings, and needs confidently while respecting the rights of others, and it is considered a key psychosocial competency in interpersonal functioning (Rathus, 1973; Alberti & Emmons, 2017). In higher education contexts, assertiveness has been linked to healthier communication patterns, emotional regulation, and adaptive coping, which contribute to students' psychological well-being and adjustment (Eslami et al., 2018; Zhang et al., 2020). Psychological well-being refers to positive functioning across domains such as autonomy, self-acceptance, purpose in life, and environmental mastery (Ryff, 1989). Prior studies consistently report that students with higher assertiveness tend to experience higher self-esteem, greater resilience, and lower emotional distress, indicating that assertiveness may function as a personal resource that promotes well-being (Mesurado et al., 2019). Evidence from cross-sectional studies shows significant positive correlations between assertiveness and overall psychological well-being as well as related constructs such as empowerment, social adjustment, and life satisfaction (Plantade-Gipch et al., 2023; Rahayu et al., 2023).

Intervention-based studies further support this association. Assertiveness-training programmes have been shown to improve students' confidence, communication competence, and mental health outcomes, providing preliminary causal evidence for the beneficial role of assertiveness in enhancing psychological functioning (Ganji et al., 2022; Ilnytska & Onischenko, 2022). In Malaysian and regional student populations, assertiveness has also been associated with psychological empowerment and positive self-beliefs, particularly in professional and health-science education settings (Sabrina et al., 2022; Şen et al., 2022). However, findings also indicate that the relationship may vary depending on cultural norms, population characteristics, and the type of well-being construct measured. Studies suggest that assertiveness demonstrates stronger associations with empowerment and social adjustment outcomes, and comparatively smaller yet significant relationships with global well-being indicators (Rahayu et al., 2023; Plantade-Gipch et al., 2023). Despite these contextual variations, the literature generally supports the conclusion that assertiveness is positively linked to psychological well-being among university students.

3.2. Social Skills and Psychological Well-Being

Psychological well-being is a multidimensional construct encompassing individuals' positive functioning, emotional balance, self-acceptance, autonomy, and quality of interpersonal relationships. Within higher education contexts, psychological well-being has been linked to students' academic engagement, resilience, and overall adjustment to university life (García-Álvarez et al., 2021; Tekin, 2021). Based on the literature, social skills may be broadly defined as learned interpersonal competencies that enable individuals to interact effectively, communicate appropriately, regulate behaviour, solve social problems, and maintain positive relationships with others (Betinelli et al., 2025; Elliott et al., 2015; Riggio, 2020). Although definitions vary across scholars, most agree that social skills involve both behavioural and cognitive elements and are essential for successful functioning in academic, professional, and everyday social contexts (Dowd & Tierney, 2022; Lent et al., 2019; Trower, 1980). A growing body of empirical research demonstrates that students with stronger social skills report higher levels of psychological well-being across diverse cultural and educational contexts (Rosli & Perveen, 2021; Arhuis-Inca & Ipanaqué-Zapata, 2023).

Evidence from multiple cross-sectional studies indicates a positive relationship between various social skills constructs and psychological well-being. For instance, emotional intelligence has been found to

correlate moderately with psychological well-being among university students (Tekin, 2021; Tahir & Jabeen, 2022). Similarly, social connectedness has been shown to positively predict well-being indicators such as happiness, vitality, and flourishing (Yelpaze et al., 2021). Studies focusing on prosocial behavior also report positive associations with psychological well-being, particularly with dimensions related to positive relations with others (Rosli & Perveen, 2021; Liaqat & Deeba, 2025). Moreover, several studies highlight that the relationship between social skills and psychological well-being is often mediated by emotional and cognitive factors. Emotional expression fully mediated the relationship between social problem-solving skills and psychological well-being among nursing students (Eroğlu & Öner, 2023), while social self-efficacy mediated the relationship between positive thinking and life satisfaction among first-year university students (Amin et al., 2021).

These findings suggest that social skills enhance well-being not only directly but also by strengthening students' confidence in their interpersonal abilities and emotional regulation capacities. Although most studies report moderate to strong associations, weaker correlations have also been documented when broad or generalized measures of social skills are used (Tekin, 2021). This variation suggests that psychological well-being is influenced by multiple interacting factors beyond social competence alone. Nevertheless, the consistency of positive findings across studies supports the theoretical assumption that social skills are an important psychosocial resource for students in higher education.

3.3. The Interrelationship between Assertiveness, Social Skills, and Psychological Well-Being

Psychological well-being among university students has become an increasing concern due to rising academic, social, and emotional demands. It is commonly conceptualised as involving positive functioning, emotional balance, self-acceptance, and the ability to maintain satisfying interpersonal relationships. Evidence from Malaysian public university students indicates notable levels of psychological distress, including depression, anxiety, and stress, highlighting the importance of examining psychosocial factors associated with students' well-being (Latiff et al., 2014; Rathakrishnan et al., 2022). Within this context, assertiveness and social skills may be understood as two related but distinct interpersonal competencies that are relevant to students' adjustment and well-being.

Assertiveness is often described as lying on a behavioural continuum between passivity and aggression, representing a balanced form of self-expression that allows individuals to communicate their views firmly without violating the rights of others (Alberti & Emmons, 2017; Lazarus & Folkman, 1984). Conceptually, assertiveness has evolved from being viewed as a personality characteristic to being recognised as a social and communication skill. Early work by Salter (1949) linked assertiveness to emotional expressiveness, while later scholars conceptualised it as a form of social competence. Lazarus (1973) identified several core assertive abilities, including expressing one's needs openly, saying "no," communicating both positive and negative feelings, and initiating, maintaining, and ending conversations appropriately. More recent definitions similarly emphasise that assertiveness involves direct, honest, and respectful communication that protects one's own rights without undermining those of others (Afdal et al., 2019; Berger et al., 2019; Comstock, 2020; Oducado, 2021; Scott, 2018; Shanmugam & Kathyayini, 2017; Speed et al., 2018).

Social skills, in contrast, represent a broader set of learned interpersonal behaviours that enable individuals to interact and relate harmoniously and effectively with others, while also improving social acceptance and reinforcement in social contexts (Radley & Dart, 2022). These include communication, cooperation, empathy, emotional regulation, and conflict management (Del Prette & Del Prette, 2005). Social skills have been linked to academic success, professional readiness, emotional intelligence, and successful adaptation to the workplace, indicating that they are a core component of students' broader developmental functioning (Betinelli et al., 2025; Gul et al., 2023; Shengyao et al., 2024; Suleman et al., 2022; Vanhove et al.,

In the Malaysian context, the importance of social skills extends beyond interpersonal functioning to include employability and graduate readiness. Despite national development initiatives and increasing job opportunities, graduate unemployment remains a persistent issue, suggesting a mismatch between labour market expectations and graduates' competencies (Moo & Wan, 2023). Employers increasingly emphasise soft skills such as communication, teamwork, adaptability, and interpersonal effectiveness in addition to technical knowledge (Khazanah Research Institute, 2018;2020; World Economic Forum, 2025). These patterns suggest that social skills are relevant not only to career development but also to students' broader adjustment and well-being during university life. At the student level, evidence suggests that weaker social skills are associated with higher social anxiety, reduced interpersonal confidence, and difficulties in academic and social adjustment (Kipli et al., 2022). This is especially relevant for first-year university students, who must navigate new social environments, establish peer relationships, and adapt to academic demands simultaneously. It is also important to distinguish social skills from social support.

Cross-cultural evidence further supports the interrelationship among these constructs. Demir et al. (2012) demonstrated that social skills are associated with happiness through friendship quality, suggesting that interpersonal competence enhances well-being through the development of meaningful social relationships. Similarly, other studies indicate that social skills are associated with academic adjustment, resilience, and reduced emotional distress (Soares et al., 2021) while assertiveness is associated with effective self-expression and interpersonal confidence (Sial et al., 2021). Taken together, these findings suggest that students who are able to communicate effectively, express themselves appropriately, and maintain constructive social relationships may be more likely to experience positive psychological functioning.

Despite these findings, empirical studies that examine assertiveness, social skills, and psychological well-being simultaneously remain limited, particularly in the Malaysian higher education context. Most local research has focused on general soft skills or psychological distress, rather than examining how specific interpersonal competencies relate to positive indicators of well-being. This gap is important because first-year university students are undergoing a critical transition period in which both assertiveness and social skills may play a key role in psychological adjustment. Overall, the literature suggests that assertiveness and social skills are positively associated with psychological well-being, although the strength and expression of these relationships may vary across cultural and contextual settings. These interpersonal competencies may therefore be considered important psychosocial resources associated with students' well-being, particularly during periods of transition, uncertainty, and heightened stress, such as the post-pandemic university environment.

3.4. Demographic Factors and Study Variables

Previous research indicates that demographic factors such as gender, field of study, and socioeconomic status (SES) may be associated with variations in social skills and psychological well-being among university students. However, the findings across studies remain inconsistent, suggesting that these factors may function as background influences rather than primary determinants. Studies examining gender differences in social skills report mixed findings. For example, Carneiro Machado et al. (2020) found that gender did not significantly influence overall social skills; however, female students demonstrated higher scores in specific situations such as assertiveness in expressing positive emotions. Similarly, Prada et al. (2022) reported that female students exhibited stronger teamwork-related social skills, although differences were not consistent across all dimensions.

In relation to psychological well-being, several studies indicate no significant overall gender differences (Salleh & Mustafa, 2016; Pumpuang et al., 2021). Nevertheless, some evidence suggests that females may score higher in dimensions such as positive relationships and purpose in life, whereas males may demonstrate higher autonomy (Iqbal & Nishat, 2017; Martud et al., 2019). These variations are often explained by socialisation processes, where males are encouraged towards independence and females towards relational connectedness. The field of study has also been linked to differences in both social

skills and psychological well-being. Research shows that students in programmes with higher practical and interpersonal engagement, such as nursing, tend to demonstrate stronger social skills compared to students in more theoretical disciplines (Carneiro Machado et al., 2020).

Similarly, studies on psychological well-being indicate that students in fields such as engineering and health sciences may report lower levels of well-being due to heavier academic workloads and practical demands (Panahi et al., 2013; Aisyah et al., 2021). In contrast, students in social science-related programmes may experience relatively better emotional adjustment due to differences in learning environments and academic expectations. Socioeconomic status (SES) is another factor that has been associated with students' social and psychological functioning. Students from lower SES backgrounds may experience challenges in forming and maintaining social relationships due to limited access to social resources and support systems (Gul et al., 2023). In contrast, students from higher SES backgrounds tend to benefit from stronger family and community support, which facilitates social engagement and interpersonal confidence.

In terms of psychological well-being, research indicates that students from higher SES backgrounds generally report better outcomes across multiple dimensions, including environmental mastery, self-acceptance, and life purpose (Dougall et al., 2023; Rubin, 2020). However, subjective SES has been found to be a stronger predictor of psychological functioning compared to objective SES indicators (Navarro-Carrillo et al., 2020). Overall, the literature demonstrates that gender, field of study, and SES may be associated with variations in social skills and psychological well-being. However, the findings remain inconsistent across contexts and populations. Moreover, most studies have examined these factors independently rather than considering them alongside key psychosocial competencies such as assertiveness and social skills. Within the Malaysian higher education context, empirical research examining these demographic differences remains limited, particularly among first-year undergraduate students. Therefore, these demographic variables are included in the present study as control variables to account for potential background influences when examining the associations between assertiveness, social skills, and psychological well-being.

3.5. Conceptual Framework of the Study

Based on the literature reviewed, this study proposes a conceptual framework in which assertiveness and social skills are treated as independent variables associated with psychological well-being as the dependent variable. Demographic variables, namely gender, field of study, and socioeconomic status, are included as control variables to account for potential variations in students' backgrounds. The framework assumes that higher levels of assertiveness and social skills are associated with higher levels of psychological well-being. However, consistent with the cross-sectional design of the study, these relationships are interpreted as statistical associations and predictive contributions rather than causal effects.

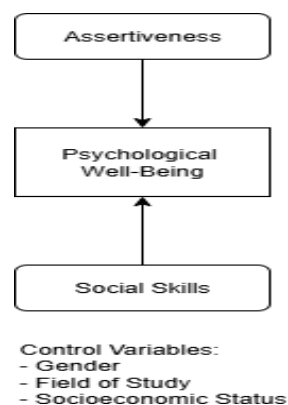


Figure 1. Conceptual Framework of Study

4. Methodology

4.1. Research Design

This study employed a quantitative correlational research design using a cross-sectional approach to examine the relationships between assertiveness, social skills, and psychological well-being among first-year undergraduate students in Malaysian public universities. A correlational design was considered appropriate as the study aimed to identify the strength and direction of relationships among variables without manipulating them. The cross-sectional approach enabled data to be collected at a single point in time, providing a snapshot of students' psychosocial competencies and well-being.

4.2. Population and Sampling

The target population of this study comprised first-year undergraduate students enrolled in Malaysian public universities during the 2021/2022 academic session. First-year students were selected as they are in a transitional phase of higher education, involving significant academic, social, and psychological adjustment. A multi-stage sampling procedure was employed to ensure representativeness across geographical regions and institutional contexts. In the first stage, cluster random sampling was applied due to the large and geographically dispersed population across public universities in Malaysia. These universities were grouped into five zones based on the classification by the Ministry of Higher Education, namely Central, Southern, Northern, Eastern, and Borneo. One university was randomly selected from each zone using a simple random technique marble-from-jar method, resulting in the selection of five universities: Universiti Teknologi MARA (UiTM), Universiti Malaysia Pahang (UMP), Universiti Teknikal Malaysia Melaka (UTeM), Universiti Sains Malaysia (USM), and Universiti Malaysia Sabah (UMS). This approach ensured representation across different geographical regions and institutional categories.

Based on institutional data, the total population of first-year undergraduate students across the five selected universities was 11,803 students. According to Krejcie and Morgan (1970), the minimum required sample size for a population of this size is 377 respondents, which is sufficient to achieve a 95% confidence level with a 5% margin of error. To account for potential incomplete, damaged, or unreturned questionnaires, an additional 10% was added (Mohd Najib, 2005), resulting in a proposed minimum sample size of 415 students. However, for this study, proportional stratified sampling was employed to determine the sample size required from each university. This technique is appropriate for populations that are not homogeneous (Creswell, 2005), as it ensures that each subgroup is adequately represented.

The selected universities differ in terms of institutional categories and geographical locations, with Universiti Sains Malaysia (USM) classified as a research university, Universiti Teknologi MARA (UiTM) and Universiti Malaysia Sabah (UMS) as comprehensive universities, and Universiti Teknikal Malaysia Melaka (UTeM) and Universiti Malaysia Pahang (UMP) as focused universities. Therefore, proportional representation was necessary to avoid underrepresentation of specific groups. In this study, approximately 10% of the population from each university was selected, resulting in a target sample size of 1,180 students (UiTM = 275, UTeM = 209, USM = 236, UMP = 207, UMS = 253). This sample size exceeds the minimum requirement and is considered adequate to represent the population (Fraenkel & Wallen, 1993). In the third stage, systematic random sampling was used to select respondents. Student lists were arranged alphabetically, and every *n*th student was selected until the required sample size for each university was achieved. This method ensured equal probability of selection and reduced sampling bias.

However, the sample for this study was drawn exclusively from the five selected universities which are UiTM, UMP, UTeM, USM, and UMS. While these universities represent multiple geographical zones in Malaysia and provide a diverse sample, the findings of this study are limited to the selected

institutions and should be interpreted with caution, as they may not be fully generalisable to all Malaysian public universities. For data collection, questionnaires were administered using an online platform (Google Forms). A total of 1,330 questionnaires were distributed across the five selected universities. Of these, 1,206 completed responses were received and retained for analysis, while 124 questionnaires were not returned, resulting in an overall response rate of 90.7%.

At the institutional level, slight variations in response rates were observed. Universiti Teknologi MARA (UiTM) recorded 275 responses from 310 distributed questionnaires (88.7%), Universiti Teknikal Malaysia Melaka (UTeM) recorded 209 responses from 236 distributed questionnaires (88.6%), Universiti Sains Malaysia (USM) recorded 236 responses from 266 distributed questionnaires (88.7%), Universiti Malaysia Pahang (UMP) recorded 207 responses from 233 distributed questionnaires (88.8%), and Universiti Malaysia Sabah (UMS) recorded 279 responses from 285 distributed questionnaires (97.9%), reflecting the highest response rate among the selected institutions.

Table 1. Sampling and Response Rate by University

University	Population (N)	Target Sample (≈10%)	Questionnaires Distributed	Responses Received	Non-response	Response Rate (%)
UiTM	2,750	275	310	275	35	88.7
UTeM	2,095	209	236	209	27	88.6
USM	2,360	236	266	236	30	88.7
UMP	2,068	207	233	207	26	88.8
UMS	2,530	253	285	279	6	97.9
Total	11,803	1,180	1,330	1,206	124	90.7

4.2.1 Ethical Considerations

This study adhered to standard ethical guidelines for research involving human participants. Prior to data collection, informed consent was obtained from all participants through an online Google Form. Participants were informed about the purpose of the study, the voluntary nature of their participation, and their right to withdraw at any time without penalty. Permission to conduct the study and collect data was obtained from the relevant institution. No personally identifiable information was collected, and all responses were recorded anonymously. The data were stored securely and used solely for academic research purposes. Formal institutional ethics approval was not obtained for this study, as it was conducted in accordance with institutional practices for low-risk survey research. However, all procedures were designed to ensure confidentiality, anonymity, and the protection of participants' rights.

4.2. Research Instrument

Research instruments are tools specifically designed for data collection. To produce a comprehensive and credible study, researchers may employ one or more instruments depending on the nature and purpose of the investigation (Fraenkel et al., 2018; Merriam & Tisdell, 2015). In the present study, a questionnaire was used as the main instrument to obtain the data required to answer the research questions and test the study hypotheses. According to Fraenkel et al. (2012), questionnaires may either be developed by the researcher or adapted from existing instruments in order to save time and ensure measurement consistency. Accordingly, the questionnaire used in this study was developed using an adapt-and-adopt approach.

The questionnaire comprised four main sections. Section A collected respondents' demographic information, including gender, ethnicity, field of study, place of residence, and socioeconomic status. Section B measured assertiveness using. Section C assessed students' social skills. Finally, Section D measured psychological well-being. The instruments used in this questionnaire had undergone expert validation in previous studies. However, the SSI-Del-Prette was subjected to content validation again

before being used in the present study. After the expert validation process was completed, the SSI was refined and subsequently tested for reliability through a pilot study together with the RAS and Ryff's Psychological Well-Being Scale.

4.3.1. Rathus Assertiveness Schedule (RAS)

Assertiveness in this study was measured using the Rathus Assertiveness Schedule (RAS), originally developed by Spencer Rathus (1973, 1978). The instrument was designed to assess the level of assertiveness among college students and adults. In the present study, the Malay version of the RAS was used. This version was adapted from previous local studies conducted by Abdullah (2005), Hawa (2014), Zainol Abidin (2016), Bakri (2016) and Jusoh et al.(2023). The RAS used in this study contained 30 items covering five dimensions of assertive behaviour, namely the right to mutual respect, the right to mutual feelings, the right to make mistakes, the right to say “no,” and the right to ask questions and communicate. Fourteen items measured assertive behaviour, whereas sixteen items measured non-assertive behaviour. Responses were recorded on a five-point Likert scale ranging from 1 = strongly untrue to 5 = strongly true. Therefore, the minimum possible total score was 30 and the maximum possible total score was 150..As shown in Table 2, the instrument includes both positively and negatively worded items. All negatively items were reverse scored prior to analysis to ensure consistency in interpretation. Although the instrument comprises multiple dimensions, subscale scores were retained for descriptive purposes only and were not included in inferential analyses. The use of a composite mean score provides a parsimonious representation of assertiveness in regression analysis.

Table 2. Distribution of Positive and Negative Items for the Rathus Assertiveness Schedule (RAS)

Subscale	Description	Positive Items	Negative Items
1	Right to mutual respect	18, 20, 29	1, 2
2	Right to mutual feelings	8, 21	11, 15, 17, 24, 26
3	Right to make mistakes	22, 27, 28	4, 16, 19
4	Right to say "no"	3, 25	5, 9, 14, 23
5	Right to ask and communicate	6, 7, 10, 13	12, 30

4.3.2. Social Skills Inventory Del-Prette (SSI Del-Prette)

Social skills were measured using the Social Skills Inventory (SSI–Del-Prette), developed by Del Prette and Del Prette (2001, 2011, 2019). In this study, the Malay version adapted from Nor Azima (2008) was used. The SSI–Del-Prette has been widely used in Western contexts and has demonstrated satisfactory validity and reliability among college and university students aged between 18 and 25 years (Del Prette & Del Prette, 2019). In addition, the instrument has been used across clinical and non-clinical populations and in various fields such as health, counselling, education, forensic contexts, workplace settings, and higher education.

The version used in this study consisted of 38 items distributed across five factors, namely coping and self-assertion with risk, self-assertion in expressing positive affect, conversation and social confidence, self-exposure to strangers and new situations, and self-control of aggressiveness. Respondents were required to indicate their agreement using a four-point Likert scale ranging from 1 = never to 4 = always. The minimum possible total score was 38, while the maximum possible total score was 152. As shown in Table 3. The instrument includes both positively and negatively worded items. All negatively items were reverse scored prior to analysis to ensure consistency in interpretation. For the purpose of analysis, composite scores were computed by calculating the mean of all items to represent overall social skills. Subscale scores for each factor were also computed as mean values but were used for descriptive purposes only. The use of an overall composite score is consistent with prior studies and provides a parsimonious representation of psychological well-being in regression analysis.

Table 3. Distribution of Positive and Negative Items for the Social Skills Inventory (SSI Del-Prette)

Subscale	Description	Positive Items	Negative Items
1	Coping and self-assertion with risk	4, 5, 11, 21, 22, 29	25, 33, 34, 37
2	Self-assertion in expressing positive affect	3, 6, 10, 20, 28, 30, 35	13
3	Conversation and social confidence	12, 14, 17, 32	8, 19, 24
4	Self-exposure to strangers and new situations	1, 7, 31	9, 23, 26, 36
5	Self-control of aggressiveness	15, 16, 27, 38	2, 18

4.3.3. Ryff's Psychological Well-Being Scale

Psychological well-being was measured using Ryff's Psychological Well-Being Scale (Ryff, 1989), which comprises six dimensions, namely autonomy, environmental mastery, personal growth, purpose in life, positive relations with others, and self-acceptance. Ryff developed several versions of this instrument, including long, medium, and short forms. In the present study, the 42-item short version was used, with seven items representing each dimension. The Malay version used in this study was adapted from previous local studies conducted by Hasimah (2010), Norsayyidatina (2017), Roslan et al. (2017), and Salina and Rahimi (2015).

Responses were measured using a six-point Likert scale ranging from 1 = strongly disagree to 6 = strongly agree. Negative items were reverse scored before analysis. The minimum possible total score for the 42 items was 42, while the maximum possible score was 252. The 42-item version of Ryff's Psychological Well-Being Scale comprises six dimensions, as presented in Table 4. The instrument includes both positively and negatively worded items. All negatively worded items were reverse scored prior to analysis to ensure consistency in interpretation, where higher scores indicate higher levels of psychological well-being. For the purpose of analysis, a composite score was computed by calculating the mean of all items to represent overall psychological well-being. Mean scores for each dimension were also computed but were used for descriptive purposes only. The use of an overall composite score is consistent with prior studies and provides a parsimonious representation of psychological well-being in regression analysis.

Table 4. Distribution of Positive and Negative Items for Ryff's Psychological Well-Being Scale

Dimension	Description	Positive Items	Negative Items
1	Autonomy	1, 7, 25, 37	13, 19, 31
2	Environmental mastery	2, 8, 20, 38	14, 26, 32
3	Personal growth	9, 21, 33	3, 15, 27, 39
4	Positive relations with others	4, 22, 28, 40	10, 16, 34
5	Purpose in life	11, 29, 35	5, 17, 23, 41
6	Self-acceptance	6, 12, 24, 42	18, 30, 36

4.4. Instrument Validity

Instrument validity is crucial in ensuring that a measurement accurately reflects what it intends to measure (Azizi Yahya et al., 2018; Field, 2018). It is essential that the validation process is performed carefully to assess whether the instrument effectively measures the intended constructs. Validity can be classified into several types, including face validity, content validity, criterion validity, and construct validity (Taherdoost, 2016). In this study, the primary focus was on content validity, which evaluates whether each item in the instrument is suitable for its intended purpose.

For this research, the instruments used were all in Malay and adapted from previous studies. The Rathus Assertiveness Schedule (RAS) and Ryff's Psychological Well-Being Scale have been widely employed in local studies and have demonstrated strong validity. For example, Abdullah (2005) used the RAS to assess assertiveness in employees at the Johor State Customs Department, achieving a content validity of 0.73. Similarly, Hawa (2014) reported a content validity of 0.82 for the RAS in exploring assertiveness and organizational commitment.

Furthermore, Salina & Rahimi (2015) conducted a study testing the validity of Ryff's Well-Being Scale, obtaining a high content validity index (CVI) of 0.94. In contrast, Hasimah (2010) also found a high content validity score of 0.92 when using Ryff's scale to measure psychological well-being among adolescents. Since these two instruments demonstrated strong validity, the researcher focused on validating the Social Skills Inventory Del-Prette (SSI Del-Prette) (Del Prette & Del Prette, 2001; Nor Azima, 2008).

4.4.1 Process of Determining Content Validity for SSI Del-Prette

The Content Validity Index (CVI) was chosen to assess the content validity of the SSI Del-Prette instrument due to its advantages, such as being more cost-effective and practical than other methods (Tojib & Sugianto, 2006). The method involves obtaining feedback from a panel of experts to ensure detailed evaluation of each item, which provides a more comprehensive understanding than other methods like Cohen's Kappa or Tinsley-Weiss T Index. The CVI can be calculated through two methods which are the Item Content Validation Index (I-CVI) and the Sum of Content Validation Index (S-CVI). The I-CVI guides experts in evaluating and possibly revising items based on their relevance (Polit & Beck, 2006; Salbiah @ Salleh et al., 2017). In this study, external reviewers including experts in psychometrics and counseling, were selected to assess the SSI instrument. Expert selection was based on criteria such as experience, academic qualifications, and expertise in relevant fields, with six experts chosen for their qualifications and experience in evaluating instruments.

The expert evaluation used a 10-point Likert scale, where scores of 1 to 5 indicated items were unsuitable, and scores of 6 to 10 indicated items were suitable. Experts were also asked to provide qualitative feedback to improve the instrument's relevance to Malaysia's language, society, and culture. To calculate content validity, the study used the Content Validity Ratio (CVR) formula, which measures the agreement among experts on the relevance of each item (Lawshe, 1975). A CVR score of above 0.80 is recommended for new instruments, ensuring high content validity (Lau et al., 2018). In this study, the SSI instrument achieved an S-CVI of 0.99, indicating very high content validity. This confirms that the instrument's items are appropriate and accurately represent the constructs being measured.

4.5. Instrument Reliability

Reliability is essential for ensuring the stability, predictability, and accuracy of a research tool's findings (Hamidah Yusof et al., 2015). It refers to the consistency of results when the same instrument is used repeatedly (Azizi Ahmad, 2010). Several methods can assess reliability, including Kuder Richardson, Internal Consistency, Test-Retest, Inter-Rater Reliability, and Split-Half, with Cronbach's Alpha being the most commonly used (George & Mallery, 2016). To assess the reliability of the instruments in this study, the researcher used Cronbach's Alpha, a coefficient that measures internal consistency among the items in an instrument (Sidek Mohd Noh, 1998).

A Cronbach's Alpha value above 0.6 is considered acceptable, while values above 0.7 are ideal (Cresswell, 2016; Pallant, 2010). For exploratory studies, values as low as 0.6 may still be acceptable (Mohd Majid, 2005). Since the instruments used in the study had already been tested in previous research, they were re-tested within the context of Malaysian society, considering modifications such as phrasing and cultural context. A pilot study was conducted with 137 first-year undergraduate students from a university on the east coast of Malaysia, using the RAS, SSI Del-Prette, and Ryff's Psychological Well-Being Scales in Malay. The reliability of the instruments was assessed using Cronbach's Alpha to ensure their consistency and suitability for the research.

The results of the reliability tests showed that the RAS achieved a Cronbach's Alpha of 0.93, indicating excellent reliability for measuring assertiveness. The SSI Del-Prette instrument displayed an even higher Cronbach's Alpha of 0.94, confirming its very high reliability for assessing social skills. The Ryff's Psychological Well-Being Scale also demonstrated strong reliability with a Cronbach's Alpha of

0.88 which is considered high for evaluating psychological well-being. These results confirm that all three instruments exhibit strong internal consistency, making them reliable tools for measuring assertiveness, social skills, and psychological well-being in university students.

4.6. Normality of data

The normality of the data was assessed using both statistical indicators (skewness and kurtosis) and graphical methods (histogram and scatterplot of standardized residuals). Based on the descriptive statistics presented in Table 5, the skewness and kurtosis values for all variables were within the acceptable range of ± 1 , indicating that the data were approximately normally distributed. Specifically, assertiveness (RAS) showed a skewness value of 0.159 and kurtosis of 0.092, social skills (SSI) showed a skewness of -0.104 and kurtosis of 0.098, and psychological well-being (Ryff) recorded a skewness of 0.018 and kurtosis of -0.117. These values suggest that the distributions for all variables did not deviate substantially from normality.

In addition, graphical inspection of the histogram of standardized residuals demonstrated a bell-shaped distribution, further supporting the assumption of normality. The distribution of residuals appeared symmetrical and centred around zero, indicating no serious deviation from normal distribution. The scatterplot of standardized residuals also showed a random distribution of data points with no clear pattern or funnel shape. This suggests that the assumptions of normality and homoscedasticity were satisfied. Overall, the results indicate that the data met the normality assumption required for parametric statistical analyses, including correlation and regression. Furthermore, the large sample size ($N = 1,206$) supports the robustness of parametric tests, as the Central Limit Theorem suggests that the sampling distribution approximates normality. All inferential analyses were conducted using mean scores, and z-score standardisation was not applied.

Table 5. Descriptive Statistics for Study Variables

Variable	Mean	SD	Skewness	Kurtosis
Assertiveness (RAS)	2.792	0.390	0.159	0.092
Social Skills (SSI)	2.849	0.524	-0.104	0.098
Psychological Well-Being (Ryff)	3.202	0.548	0.018	-0.117

5. Findings and Discussion

This section presents the findings of the study in accordance with the research objectives. The results are organised into four main parts: (i) descriptive analysis of the study variables, (ii) examination of the relationships between assertiveness, social skills, and psychological well-being, (iii) analysis of the predictive contributions of assertiveness and social skills to psychological well-being, and (iv) hierarchical regression analysis to determine whether these relationships remain significant after controlling for demographic variables.

Descriptive statistics were first examined to provide an overview of the distribution of the variables. Subsequently, Pearson correlation analysis was conducted to assess the relationships among the variables. Multiple regression analysis was then performed to determine the extent to which assertiveness and social skills predict psychological well-being. Finally, hierarchical regression analysis was conducted to evaluate the predictive contributions of these variables after accounting for demographic factors, namely gender, field of study, and socioeconomic status. All analyses were conducted using appropriate parametric statistical techniques, as the assumptions of normality were met.

5.1. Descriptive Analysis of the Study Variables

Descriptive statistics were conducted to examine the mean scores, standard deviations, skewness, and kurtosis of the study variables. The results are presented in Table 5. The findings show that the mean score for assertiveness was 2.79 (SD = 0.39), while social skills recorded a mean score of 2.85 (SD = 0.52). Psychological well-being showed a higher mean score of 3.20 (SD = 0.55) compared to the other variables. These results indicate that, on average, students reported relatively higher psychological well-being compared to assertiveness and social skills. In addition, the skewness and kurtosis values for all variables were within the acceptable range of ± 1 , suggesting that the data were approximately normally distributed. Therefore, the assumptions for parametric statistical analyses were satisfied.

5.2. Examination of the Relationships Between Assertiveness, Social Skills, and Psychological Well-Being

Pearson correlation analysis was conducted to examine the relationships among the study variables. In this study, two alternative hypotheses were tested. The first hypothesis (H_{a1}) proposes that there is a significant relationship between assertiveness and psychological well-being, while the second hypothesis (H_{a2}) proposes that there is a significant relationship between social skills and psychological well-being. The results are presented in Table 6.

The findings indicated that assertiveness was significantly and positively correlated with psychological well-being, $r(1204) = .259, p < .001$. This result shows that the assumption of no relationship stated in H_{o1} is not supported. Therefore, H_{a1} was supported, indicating that a significant relationship exists between assertiveness and psychological well-being.

Similarly, social skills were significantly and positively correlated with psychological well-being, $r(1204) = .344, p < .001$. Thus, H_{a2} was supported, indicating that a significant relationship exists between social skills and psychological well-being. In addition, assertiveness was significantly correlated with social skills, $r(1204) = .224, p < .001$, indicating that these variables are related constructs.

Table 6. Correlation Matrix of Study Variables (N=1206)

Variable	1	2	3
Assertiveness	—		
Social Skills	.224***	—	
Psychological Well-Being	.259***	.344***	—

Note. $N = 1,206$. ** $p < .001$.

The findings of this study revealed a significant positive relationship between assertiveness and psychological well-being among first-year university students. This result is consistent with previous research suggesting that assertiveness is associated with better emotional functioning and adjustment in higher education contexts. Prior studies have shown that assertiveness is positively related to academic, social, and personal-emotional adjustment, with social adjustment often demonstrating the strongest association. This indicates that assertive behaviour may facilitate more effective peer interaction and social integration within university environments (Rahayu et al., 2022).

From a psychosocial perspective, assertiveness can be understood as a personal resource that is associated with higher levels of confidence and perceived competence in managing academic and social demands. Empirical evidence indicates that students who demonstrate stronger assertive tendencies tend to report greater psychological empowerment and self-efficacy (Sabrina et al., 2021; Şen et al., 2022). In addition, previous studies have linked assertiveness with higher self-esteem, suggesting that individuals who are able to express themselves confidently are more likely to develop a positive sense of self-worth (Chandio et al., 2024; Chakraborty et al., 2020). Further support for this finding can be observed in studies examining broader indicators of well-being. Lower levels of assertiveness have been associated with reduced psychological and social well-being, while higher assertiveness has been linked to lower levels of stress across academic, social, and personal domains (Plantade-Gipch et al., 2023;

Hernández-Xumet et al., 2024). Taken together, these findings suggest that assertiveness is consistently associated with adaptive psychological outcomes.

However, it is important to note that the strength of the relationship observed in this study is modest. This suggests that while assertiveness is associated with psychological well-being, it is likely one of several contributing factors. Cultural considerations may also play a role, particularly in collectivist contexts such as Malaysia, where the expression of assertiveness may be moderated by social norms that emphasise harmony and interpersonal sensitivity. As such, the relationship between assertiveness and psychological well-being may vary depending on cultural expectations and social context. The present study also found a significant positive relationship between social skills and psychological well-being, which is consistent with previous research conducted in higher education settings (Tekin, 2021; Arhuis-Inca & Ipanaqué-Zapata, 2023). From a theoretical perspective, this finding aligns with psychosocial and positive psychology frameworks, which suggest that effective interpersonal functioning is associated with improved psychological well-being through the development of supportive relationships, emotional expression, and adaptive coping strategies (Eroğlu & Öner, 2023).

Students with stronger social skills are generally better able to communicate effectively, manage interpersonal conflicts, and maintain meaningful social connections. These competencies are associated with better emotional adjustment and overall mental health outcomes. In addition, prior research suggests that social skills may operate through mechanisms such as emotional regulation and social self-efficacy, further supporting their association with psychological well-being (Amin et al., 2021). The positive correlation observed between assertiveness and social skills in this study further suggests that these constructs are related aspects of interpersonal competence. Students who are more assertive may also be more capable of engaging in effective social behaviours, such as clear communication and appropriate self-expression. However, the relatively modest strength of this relationship indicates that assertiveness and social skills, while related, represent distinct constructs.

Overall, the findings of this study support existing literature indicating that both assertiveness and social skills are positively associated with psychological well-being among university students. However, consistent with the cross-sectional design of the study, these findings should be interpreted as statistical associations rather than causal relationships. From a practical perspective, the results suggest that higher education institutions may benefit from supporting the development of students' interpersonal competencies. Initiatives such as communication skills training, peer mentoring programmes, and social-emotional learning interventions may be beneficial in supporting students' adjustment and well-being. Future research is recommended to explore additional factors associated with psychological well-being, as well as to examine these relationships using longitudinal or experimental designs to better understand their direction and development over time.

5.3. Determine whether Assertiveness and Social Skills Predict Psychological Well-Being

This objective aimed to determine whether assertiveness and social skills predict psychological well-being. The alternative hypothesis for this objective (H_{a3}) proposes that assertiveness and social skills significantly predict psychological well-being. Multiple regression analysis was conducted, and the results are presented in Table 7. The regression model was statistically significant, $F(2, 1203) = 108.777, p < .001$, explaining 15.3% of the variance in psychological well-being ($R^2 = .153$). Both assertiveness ($\beta = .192, p < .001$) and social skills ($\beta = .301, p < .001$) were found to be significant predictors of psychological well-being. Therefore, H_{a3} was supported, indicating that assertiveness and social skills significantly predict psychological well-being.

Table 7. Analysis Predicting Psychological Well-Being (N=1206)

Predictor	B	SE	β	<i>t</i>	<i>p</i>
Assertiveness	0.269	0.038	0.192	7.026	< .001

Social Skills	0.315	0.029	0.301	11.018	< .001
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Note. $N = 1,206$. $**p < .001$.

The findings of this study indicate that both assertiveness and social skills significantly predict psychological well-being among first-year university students. This suggests that these interpersonal competencies are important factors associated with variations in students' psychological well-being. The predictive relationships observed in this study are consistent with previous research, which highlights the role of interpersonal competencies in supporting students' psychological functioning. In particular, prior studies conducted in the Malaysian context have shown that social support often considered an outcome of effective social skills is associated with lower psychological distress and higher levels of well-being among university students (Abdullah et al., 2014; Rathakrishnan et al., 2022). These findings suggest that students who are able to communicate effectively and engage in positive social interactions may be more likely to develop supportive relationships that contribute to their emotional well-being.

From a theoretical perspective, the findings can be explained through interpersonal and psychosocial frameworks, which propose that effective social functioning enhances well-being through mechanisms such as social connectedness and emotional support. Cross-cultural research further indicates that social skills may contribute to psychological well-being indirectly through factors such as friendship quality and social connectedness (Demir et al., 2012). In this context, assertiveness and social skills may function in complementary ways, where assertiveness is associated with the ability to express personal needs and boundaries, while social skills are associated with maintaining and strengthening interpersonal relationships. Although both predictors were found to be significant, social skills demonstrated a relatively stronger contribution compared to assertiveness. This may suggest that, within the university context, the ability to maintain relationships and navigate social interactions plays a particularly important role in students' psychological well-being. The findings also carry practical implications for higher education institutions.

Given the reported prevalence of psychological distress among Malaysian university students (Latiff et al., 2014; Hamzah et al., 2023), programmes that support the development of interpersonal competencies may be beneficial. Interventions focusing on communication skills, peer interaction, and social-emotional development may contribute to improved student well-being. However, such initiatives should be implemented with consideration of cultural norms, particularly in collectivist contexts where interpersonal harmony is emphasised. Overall, the present findings provide empirical support that assertiveness and social skills are significant predictors of psychological well-being. While the amount of variance explained is modest, the results are statistically significant and theoretically meaningful, highlighting the importance of interpersonal competencies in understanding students' psychological well-being in higher education settings.

5.4. Examine whether Assertiveness and Social Skills Predict Psychological Well-Being after Controlling for Demographic Variables

This objective aimed to examine whether assertiveness and social skills predict psychological well-being after controlling for demographic variables. The alternative hypothesis for this objective (H_{a4}) proposes that assertiveness and social skills significantly predict psychological well-being after controlling for demographic variables. A hierarchical multiple regression analysis was conducted, and the results are presented in Table 8. In Model 1, demographic variables (gender, field of study, and socioeconomic status) were entered as predictors. The results indicated that the model was not statistically significant, $F(3, 1202) = 0.584$, $p = .625$, explaining only 0.1% of the variance in psychological well-being ($R^2 = .001$). This finding suggests that demographic variables alone do not contribute significantly to explaining psychological well-being among the students.

In Model 2, assertiveness and social skills were added to the model. The model became statistically significant, $F(5, 1200) = 43.670$, $p < .001$, explaining 15.4% of the variance in psychological well-being

($R^2 = .154$). This indicates that the inclusion of assertiveness and social skills substantially improved the explanatory power of the model. Further analysis showed that both assertiveness ($\beta = .192, p < .001$) and social skills ($\beta = .301, p < .001$) remained significant predictors of psychological well-being, while demographic variables remained non-significant. Therefore, H_{a4} was supported, indicating that assertiveness and social skills significantly predict psychological well-being even after controlling for demographic variables.

Table 8. Hierarchical Regression Predicting Psychological Well-Being (N=1206)

Predictor	B	SE	B	t	p
Model 1					
Field of Study	-0.010	0.032	-0.009	-0.327	.744
Gender	0.014	0.032	0.013	0.438	.662
Socioeconomic Status	0.030	0.025	0.035	1.219	.223
Model 2					
Field of Study	-0.013	0.030	-0.012	-0.454	.650
Gender	0.026	0.030	0.024	0.897	.370
Socioeconomic Status	0.008	0.023	0.009	0.338	.735
Assertiveness	0.269	0.038	0.192	7.026	<.001
Social Skills	0.315	0.029	0.301	11.018	<.001

Note. $N = 1,206$. $**p < .001$.

The findings of this study indicate that assertiveness and social skills remain significant predictors of psychological well-being even after controlling for demographic variables, namely gender, field of study, and socioeconomic status. This suggests that interpersonal competencies are more strongly associated with psychological well-being compared to demographic characteristics among first-year university students. The non-significant results observed for demographic variables in Model 1 indicate that gender, field of study, and socioeconomic status do not independently contribute to explaining variations in psychological well-being in this sample. This finding is consistent with previous research that has reported inconsistent or weak associations between demographic factors and psychological well-being among university students (Salleh & Mustaffa, 2016; Pumpuang et al., 2021). It also suggests that psychological well-being may be influenced more by individual and interpersonal factors rather than background characteristics alone.

At the same time, several studies point to contextual variation in these relationships. Gender has been identified as a potential moderating factor, with some studies reporting that female students tend to exhibit lower levels of assertiveness and higher levels of social anxiety compared to male students (Hayat et al., 2023; Bamoussa et al., 2023). However, other studies have found no significant gender differences, suggesting that the influence of gender may depend on cultural and situational factors (Nair et al., 2020). In addition, cultural and disciplinary contexts have been shown to shape the expression of assertiveness, particularly in collectivist societies and professional training environments where behavioural norms emphasise compliance and interpersonal harmony, such as in nursing education (Chakraborty et al., 2020; Sabrina et al., 2021). These mixed findings may help explain why demographic variables did not emerge as significant predictors in the present study.

The significant improvement in the model after the inclusion of assertiveness and social skills indicates that these variables provide meaningful explanatory value beyond demographic factors. This finding supports theoretical perspectives which emphasise the role of psychosocial competencies in shaping individuals' emotional functioning and overall well-being. In particular, interpersonal competence frameworks suggest that the ability to communicate effectively, express oneself appropriately, and maintain social relationships is associated with better psychological adjustment. Consistent with the findings in Objective 3, social skills demonstrated a relatively stronger contribution compared to assertiveness. This may indicate that, within the university context, the ability to establish and maintain social connections plays a particularly important role in students' psychological well-being.

Assertiveness, while still significant, may function as a complementary skill that supports effective communication within these relationships.

These findings also highlight the importance of considering interpersonal competencies as protective factors in promoting students' psychological well-being. Given that demographic variables did not significantly influence the outcome, interventions aimed at enhancing assertiveness and social skills may be broadly applicable across diverse student groups. However, such interventions should be implemented with consideration of cultural context, particularly in collectivist societies where interpersonal harmony and social sensitivity are emphasised. Overall, the findings suggest that assertiveness and social skills are significant predictors of psychological well-being beyond demographic influences. Although the variance explained by the model is modest, the results are statistically significant and theoretically meaningful, reinforcing the importance of interpersonal competencies in understanding students' psychological well-being in higher education settings.

6. Conclusion

This study examined the relationships and predictive contributions of assertiveness and social skills to psychological well-being among first-year university students in Malaysian public universities. The findings revealed that students reported moderate levels of assertiveness and social skills, alongside a relatively higher level of psychological well-being. The data were normally distributed, supporting the use of parametric analyses. The results further indicated that both assertiveness and social skills were significantly and positively associated with psychological well-being. In addition, both variables were found to be significant predictors of psychological well-being, with social skills demonstrating a relatively stronger contribution compared to assertiveness. Importantly, these relationships remained significant even after controlling for demographic variables, namely gender, field of study, and socioeconomic status, which were found to be non-significant predictors. Overall, the findings suggest that interpersonal competencies, particularly social skills and assertiveness, are important factors associated with psychological well-being among university students. Although the variance explained by the model was modest, the results are statistically significant and theoretically meaningful. These findings contribute to the growing body of literature highlighting the role of psychosocial competencies in supporting students' adjustment and well-being in higher education contexts.

7. Recommendation

Based on the findings, higher education institutions are encouraged to implement programmes that support the development of students' interpersonal competencies. Initiatives such as communication skills training, assertiveness development workshops, peer mentoring programmes, and social-emotional learning interventions may help enhance students' psychological well-being. In addition, university counselling services may integrate interpersonal skills training into existing mental health programmes to support students in managing academic and social challenges more effectively. Given that demographic variables were not significant predictors; such interventions may be applied broadly across diverse student groups. At the institutional level, universities may consider embedding interpersonal and psychosocial skill development into the curriculum, particularly for first-year students who are undergoing transitional adjustment. Structured programmes such as orientation modules, co-curricular activities, and student development courses may provide opportunities for students to enhance their communication and social competencies.

Future research is recommended to further leverage the strengths of large and diverse samples by examining whether the relationships among assertiveness, social skills, and psychological well-being differ across institutional and demographic subgroups. Specifically, moderation or multi-group analyses should be conducted to test whether these relationships vary by university context, gender, field of study, or socioeconomic status. Such analyses would provide a more nuanced understanding of whether

interpersonal competencies function similarly across different student populations or whether targeted interventions are needed for specific groups. In addition, future studies should extend the present findings by examining other factors that may influence psychological well-being, including personality traits, emotional intelligence, coping strategies, and social support. Given the potential conceptual overlap among the study variables, the use of factor analytic techniques, such as exploratory and confirmatory factor analysis, is also recommended to further establish the distinctiveness of assertiveness, social skills, and psychological well-being as separate constructs. Furthermore, longitudinal and experimental research designs are encouraged to better understand the directionality and developmental nature of these relationships, as the cross-sectional design of the current study limits causal interpretation.

8. Limitations of the Study

Several limitations should be acknowledged in interpreting the findings of this study. First, the use of a cross-sectional design limits the ability to establish causal relationships among the variables. The findings should therefore be interpreted as indicating statistical associations rather than causal effects. Second, the study relied on self-report questionnaires, which may be subject to response bias, including social desirability and self-perception bias. This may affect the accuracy of the responses provided by participants. Third, the sample was limited to first-year undergraduate students from selected public universities in Malaysia. Although the sample represents multiple geographical zones, the findings may not be fully generalizable to all university students, including those in private institutions or different academic levels. Finally, the study focused on a limited set of variables, namely assertiveness and social skills, in predicting psychological well-being. Other potentially important factors were not included in the model, which may explain the modest variance observed.

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