Vlog-Based Parasocial Interaction and Multidimensional Subjective Wellbeing among Malaysian University Students: A PLS-SEM Study

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ABSTRACT

Vlog-based parasocial interaction (PSI) has become increasingly relevant as university students develop perceived social and emotional connections with online content creators. This study examined the relationship between vlog-based PSI and multidimensional subjective wellbeing among Malaysian university students. A quantitative cross-sectional correlational design was employed involving 385 students recruited through online convenience sampling from public and private universities. Subjective well-being was examined through life satisfaction, positive affect, and negative affect. Data were analyzed using partial least squares structural equation modelling (PLS-SEM). Following indicator purification, the measurement model demonstrated acceptable reliability, convergent validity, and discriminant validity, although the reduced PSI item set warrants cautious interpretation. PSI was positively associated with life satisfaction ($\beta = .439$, $p < .001$) and positive affect ($\beta = .346$, $p < .001$), and negatively associated with negative affect ($\beta = -.176$, $p = .004$). PSI explained 19.3% of the variance in life satisfaction, 11.9% in positive affect, and 3.1% in negative affect. Overall, vlog-based PSI was associated with a more favourable subjective well-being profile, although the findings remain associational and context dependent.

Keywords: parasocial interaction, subjective wellbeing, life satisfaction

INTRODUCTION

Digital media have become deeply embedded in everyday life, particularly among young adults and university students who use online platforms for information, entertainment, social connection, and emotional engagement. The rapid growth of video-based social media has transformed how audiences interact with online personalities. Video blogs, or vlogs, are especially distinctive because creators frequently present their experiences, opinions, routines, and personal reflections directly to the camera. This highly personalised communication style can foster a sense of intimacy and familiarity that differs from traditional media consumption (Baldwin-White & Gower, 2021; Huang et al., 2025; Lee & Watkins, 2016). Southeast Asian audiences are highly engaged with online video content, making vlog consumption particularly relevant within the Malaysian digital environment (Thompson, 2025). Recent research also indicates that parasocial connections are no longer restricted to conventional celebrities but occur across social media influencers, livestreamers, virtual influencers, short-form video creators, and artificial agents (Stein et al., 2024; Zhang et al., 2025).

This form of media engagement is commonly understood through parasocial interaction (PSI). Horton and Wohl (1956) originally conceptualised PSI as a one-sided psychological relationship in which audiences develop a sense of familiarity, intimacy, and perceived friendship with a media figure despite the absence of genuine reciprocal interaction (Xu et al., 2024). In contemporary digital environments, repeated exposure, self-disclosure, perceived similarity, and direct communication may intensify these perceived connections. For example, intimate self-disclosure by livestreamers has been shown to strengthen parasocial phenomena, while perceived similarity is an important mechanism in the formation of PSI with both real and virtual influencers (Lu et al., 2023; Stein et al., 2024). Parasocial relationships may also function as psychologically meaningful social resources. Across several studies involving more than 3,000 participants, relationships with YouTube

creators and other media figures were perceived as more effective in fulfilling emotional needs than relationships with acquaintances, although less effective than relationships with close others (Lotun et al., 2024).

These findings make PSI particularly relevant to university students and young adults whose social and emotional lives are increasingly intertwined with digital media. Parasocial connections may offer companionship, emotional regulation, identity exploration, and perceived social support. Evidence from short-form video environments supports this potentially beneficial role. In a survey of 2,902 users in China, parasocial relationships mediated the associations between hopelessness and self-identity or well-being, while perceived similarity further shaped these relationships (Xie et al., 2025). This suggests that parasocial relationships may represent one pathway through which users derive psychological benefits from digital environments.

Evidence, however, is mixed. Among young TikTok users in Indonesia, PSI showed a small but significant positive association with subjective well-being (Mellisa & Tiatri, 2024). In contrast, interaction with social media influencers may foster parasocial relationships, belonging, and perceived support while simultaneously being associated with greater loneliness, suggesting that influencers can function as a double-edged social resource (Liu & Lee, 2024). Binge-watching has also been positively associated with parasocial relationships but negatively associated with psychosocial well-being (Shaker & Bukhari, 2025). Similarly, parasocial motives operate alongside compulsive use and platform-specific processes in predicting the well-being of university students on TikTok, illustrating that digital relationships are not uniformly beneficial or harmful (Wang & Shang, 2024).

The psychological consequences of parasocial relationships therefore remain inconsistent across studies. Parasocial connections may coexist with healthy face-to-face relationships without meaningfully influencing well-being. Ravi and Patki (2025), for example, found no significant relationship between the intensity of parasocial relationships and psychological well-being among Indian youth. Similarly, perceived social support derived from parasocial relationships was not significantly associated with psychological well-being among emerging adults in Thailand, whereas support from face-to-face relationships showed a significant positive association (Liamtaisong & Pichayayothin, 2025). These findings challenge the assumption that stronger parasocial engagement necessarily translates into better psychological functioning.

The theoretical framework of this study is primarily grounded in Parasocial Interaction Theory (Horton & Wohl, 1956) and Diener's (1984) multidimensional subjective well-being framework. Parasocial Interaction Theory explains how repeated exposure to vloggers can foster one-sided, friend-like psychological connections, while Diener's framework conceptualises well-being through life satisfaction, positive affect, and negative affect. Basic Psychological Needs Theory (Deci & Ryan, 2002) further supports this relationship by suggesting that parasocial connections may contribute to psychological need fulfilment, particularly relatedness.

Recent research further supports the need for a differentiated approach. Parasocial relationships, social media use, loneliness, and life satisfaction appear to form a complex network of associations rather than a simple direct relationship (Kurt et al., 2026). This emerging evidence suggests that the psychological significance of PSI may be better understood by examining distinct dimensions of well-being instead of relying on a single global indicator.

A second important gap concerns the dominant orientation of PSI research. Recent studies continue to examine PSI primarily as a mechanism explaining consumer behaviour, including purchase intention, electronic word-of-mouth, brand loyalty, influencer credibility, willingness to follow recommendations, and impulsive purchasing (Nadroo et al., 2024; Rehman et al., 2026; Huang & Mohamad, 2025). PLS-SEM has already been applied to model PSI in influencer-marketing and livestream-commerce contexts; however, comparatively less PLS-SEM research has examined PSI as a psychological correlate of multidimensional well-being.

A further gap is the scarcity of evidence within the Malaysian university context. Much of the available empirical work has been conducted in China, Indonesia, India, Türkiye, Thailand, Pakistan, and Western populations. The present study therefore examines vlog-based parasocial interaction and multidimensional subjective well-being among Malaysian university students. By integrating evidence on potentially supportive, neutral, and adverse consequences of parasocial relationships, the study moves beyond the assumption that PSI has a uniform

association with well-being. It also extends PSI research beyond predominantly consumer-oriented outcomes by examining whether connections with vloggers are associated differently with the cognitive and affective dimensions of subjective well-being.

Accordingly, the study used PLS-SEM to test three relationships: whether vlog-based PSI is positively associated with life satisfaction (H1), positively associated with positive affect (H2), and negatively associated with negative affect (H3). The cross-sectional design was used to estimate these associations and does not establish causal effects.

METHODOLOGY

This study employed a quantitative, cross-sectional correlational design to examine the structural relationships between vlog-based parasocial interaction (PSI) and multidimensional subjective wellbeing (SWB) among Malaysian university students. The study was non-experimental, and all variables were measured at a single point in time using a self-administered online questionnaire, and the estimated relationships were interpreted as statistical associations rather than causal effects.

The present journal was analyzed using partial least squares structural equation modeling (PLS-SEM). PLS-SEM was selected because the research model comprised multiple-item latent constructs and focused on estimating the predictive relationships between PSI and three dimensions of SWB. PSI was modelled as the exogenous construct whereas life satisfaction (LS), positive affect (PA), and negative affect (NA) were specified as endogenous constructs. All constructs were modelled reflectively using Mode A estimation. structural model therefore consisted of three paths: PSI → LS, PSI → PA, and PSI → NA (Hair et al., 2019, 2022).

Participants and sampling

The target population consisted of students enrolled in public and private universities in Malaysia who regularly consumed vlog content. Participants were recruited through non-probability convenience sampling using online university student networks and social media platforms. The minimum targeted sample size in the original survey was approximately 384 respondents, based on Cochran's (1977) sample-size formula for a large population using a 95% confidence level, an assumed population proportion of .50, and a 5% margin of error. The final analytic sample comprised 385 Malaysian university students. Because recruitment was convenience-based rather than probability-based, the sample should not be interpreted as nationally representative.

To be eligible for participation, respondents were required to be currently enrolled in a Malaysian public or private university, watch at least one vlog per week, identify a preferred or frequently watched vlogger, and possess sufficient English proficiency to understand and complete the questionnaire. Responses that did not satisfy the eligibility criteria or were incomplete were excluded from the analysis.

Measures

The questionnaire included demographic and vlog-viewing questions together with established measures of parasocial interaction and subjective well-being. The PLS-SEM model focused on four latent constructs: PSI, LS, PA, and NA. The initial measurement model comprised 27 indicators: 10 PSI items, five LS items, six PA items, and six NA items.

Parasocial Interaction

Vlog-based parasocial interaction was measured using a 10-item adaptation of the Parasocial Interaction Scale developed within the measurement tradition of Rubin et al. (1985) and Rubin and Perse (1987). The scale assesses familiarity, perceived friendship, interest, emotional involvement, and attachment toward a media figure. Responses were recorded on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). All 10 indicators (PSI1–PSI10) were entered into the initial PLS measurement model as reflective indicators. Indicator retention was subsequently evaluated through measurement-model assessment rather than by forming a single summed PSI score before analysis. Preliminary Cronbach's α for the 10-item set was .851.

Life Satisfaction

The cognitive dimension of SWB was measured using the five-item Satisfaction with Life Scale (SWLS) by Diener et al. (1985). The SWLS assess respondents' global cognitive evaluation of their lives rather than satisfaction within a specific life domain. It measured on a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). All five indicator (LS1 – LS5) were specified reflectively as indicators of the latent life satisfaction construct. Preliminary Cronbach's α was 0.860.

Positive and Negative Affect

The affective components of SWB were measured using the Scale of Positive and Negative Experience (SPANE; Diener et al., 2010). SPANE assesses the frequency of positive and negative emotional experiences during the preceding four weeks. Positive affect was initially represented by six indicators—positive, good, pleasant, happy, joyful, and contented—whereas negative affect was represented by six indicators—negative, bad, unpleasant, sad, afraid, and angry. Responses were recorded on a five-point frequency scale ranging from 1 (very rarely or never) to 5 (very often or always). PA and NA were modelled as separate reflective constructs because they represent distinguishable dimensions of SWB rather than opposite endpoints of a single continuum. Preliminary Cronbach's α was .842 for PA and .818 for NA.

Table 1 summarizes the operational definitions, indicator codes, item wordings, and response formats used in the questionnaire.

Table 1. Variables and Indicators

Variable (role)	**Code**	**Indicator wording**	**Scale**
Parasocial Interaction (exogenous / independent)	PSI1	My favourite vlogger makes me feel comfortable, as if I am with a friend.	1–5 Likert
	PSI2	I see my favourite vlogger as a natural, down-to-earth person.	1–5 Likert
	PSI3	I look forward to watching my favourite vlogger on his or her next video.	1–5 Likert
	PSI4	If my favourite vlogger appeared in a video on another channel, I would watch that video.	1–5 Likert
	PSI5	My favourite vlogger seems to understand the kinds of things I want to know.	1–5 Likert
	PSI6	If I saw a story about my favourite vlogger in a newspaper or magazine, I would read it.	1–5 Likert
	PSI7	I miss seeing my favourite vlogger when he or she is ill or on vacation.	1–5 Likert
	PSI8	I would like to meet my favourite vlogger in person.	1–5 Likert
	PSI9	I feel sorry for my favourite vlogger when he or she makes a mistake.	1–5 Likert
	PSI10	I find my favourite vlogger to be attractive.	1–5 Likert

Life Satisfaction (endogenous / dependent)	LS1	In most ways my life is close to my ideal.	1–7 Likert
	LS2	The conditions of my life are excellent.	1–7 Likert
	LS3	I am satisfied with my life.	1–7 Likert
	LS4	So far I have gotten the important things I want in life.	1–7 Likert
	LS5	If I could live my life over, I would change almost nothing.	1–7 Likert
Positive Affect (endogenous / dependent)	PA1	Positive	1–5 frequency
	PA2	Good	1–5 frequency
	PA3	Pleasant	1–5 frequency
	PA4	Happy	1–5 frequency
	PA5	Joyful	1–5 frequency
	PA6	Contented	1–5 frequency
Negative Affect (endogenous / dependent)	NA1	Negative	1–5 frequency
	NA2	Bad	1–5 frequency
	NA3	Unpleasant	1–5 frequency
	NA4	Sad	1–5 frequency
	NA5	Afraid	1–5 frequency
	NA6	Angry	1–5 frequency

Pilot Study

Prior to the main data collection, the questionnaire was pilot tested with 30 Malaysian university students. It evaluated the clarity of questionnaire instructions, comprehensibility of the items, questionnaire flow, and preliminary internal consistency of the multi-item measures. Minor formatting refinements were made following participation feedback.

Data Collection and Ethical Considerations

Data were collected through an online questionnaire created using Google Forms and distributed through university students networks and social media platforms. Before accessing the questionnaire, prospective participants were provided with information concerning the study purpose, participation requirements, voluntary nature of participation, anonymity, confidentiality, and intended academic use of the data. Participants were required to provided informed consent electronically by selecting ‘Agree’ before continuing to the questionnaire. Participation was voluntary and respondents could choose not to participate. The collected data were treated confidentially and were accessible only for research purposes.

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Data Preparation

The raw survey dataset was screened before PLS-SEM analysis. Cases were assessed for completeness, eligibility, invalid values, and duplicate responses. No missing values were observed across the 27 core psychometric indicators used in the initial measurement model. Indicator purification, where required was performed iteratively following estimation of the initial model. Indicators were evaluated individually rather than deleted simultaneously to allow the measurement model to be re-estimated after each removal.

PLS-SEM Analysis

The PLS-SEM analysis was conducted in R version 4.6.1. The seminr package (version 2.5.0) was used for primary PLS-SEM estimation and bootstrapping. The cSEM package (version 0.7.1) was used to obtain supplementary PLS model-quality indices, while lavaan (version 0.7.2) was used only as a supplementary covariance-based SEM sensitivity analysis of the purified measurement specification. The statistical analysis proceeded in two principles stages: (1) assessment of the reflective measurement model followed by assessment of the structural model.

Measurement Model Assessment

The initial measurement model contained PS1 – PS10, LS1 – LS5, PA1 – PA6, and NA1 – NA6. Reflective indicator reliability was assessed using standardized outer loadings. A loading of approximately .70 or higher was used as the prespecified indicator reliability criterion.

Where indicators failed to satisfy the loading criterion, purification was conducted iteratively, beginning with the weakest indicator, followed by model re-estimation. This procedure continued until the retained indicators met the specified criterion while maintaining sufficient indicators to represent each laten construct. The purification procedure was applied transparently because removal of indicators can alter construct content. Therefore, the sequence and loading of every removed indicator were documented in the analysis output.

Internal consistency reliability was assessed using Cronbach's alpha (α), Dijkstra-Hensenler's rho_A, and composite reliability (rho_C). Values of .70 or above were considered indicative of acceptable reliability.

Convergent validity was evaluated using the average variance extracted (AVE), with AVE values of .50 or greater indicating that a construct explained at least half of the variance in its retained indicators.

Discriminant validity was evaluated primarily using the heterotrait-monotrait ration of correlations (HTMT), with values below .85 interpreted conservatively as evidence of adequate discriminant validity (Henseler et al., 2015). The Fornell-Larcker criterion was additionally inspected as a complementary assessment, whereby the square root of a construct's AVE should exceed its correlations with the other constructs.

Indicator collinearity was examined using variance inflation factors (VIFs). Value below 3.3 were treated as a conservative indication that problematic indicator-level collinearity was unlikely.

Structural Model Assessment

Following establishment of an acceptable measurement model, the structural relationship between PSI and the three endogenous SWB constructs were assessed.

The magnitude and direction of the structural relationships were evaluated using standardized path coefficients (β). The explanatory power of PSI for each endogenous constructs was assessed using the coefficient of determinations (R^2) and adjusted R^2. Because R^2 interpretation depends on the theoretical and research context, the values were interpreted comparatively rather than treated as rigid indicators of model quality.

The contribution of PSI to each endogenous construct was further examined through effect size (f^2), using approximately .02, .15, and .36 as conventional reference values for small, medium, and large effects, respectively (Cohen, 1988).

Predictive relevance was evaluated using Stone-Genisse Q^2, with values above zero interpreted as evidence that the model demonstrated predictive relevance for the respective endogenous construct. Because each endogenous construct in the primary structural model had only one predictor, PSI as inner-model multicollinearity was not substantively informative. Collinearity assessment therefore focused primarily on the measurement indicators.

Bootstrapping and Hypothesis Testing

Statistical inference for the structural paths was obtained through nonparametric boostrapping with 5,000 resamples (Hair et al., 2019, 2022). The bootstrapping procedure produced standard errors, *t*-statistic, *p*-values, and 95% confidence intervals for each structural coefficient.

The following structural relationship were tested:

H1: PSI → Life satisfaction (LS)

H2: PSI → Positive Affect (PA)

H3: PSI→ Negative Affect (NA)

A hypothesis was considered statistically supported when the estimated path coefficient was in the theoretically expected direction, the bootstrap *p*-value was below .05, and the corresponding 95% confidence interval excluded zero. Because the structural model contained no mediating construct, indirect effects were not estimated. Total effects were therefore equivalent to the corresponding direct effects.

Table 2. Decision thresholds were pre-specified

Evaluation domain	**Criterion / threshold**	**Primary reference**
Indicator retention	Outer loading ≥ 0.70 (iterative deletion; ≥ 3 items retained)	Hair et al. (2019)
Internal consistency	Cronbach's α, rho_A, and CR ≥ 0.70	Hair et al. (2019)
Convergent validity	AVE ≥ 0.50	Fornell & Larcker (1981); Hair et al. (2019)
Discriminant validity	√AVE > inter-construct correlations; HTMT < 0.85 (conservative)	Fornell & Larcker (1981); Henseler et al. (2015); Hair et al. (2019)
Collinearity	Indicator VIF preferably < 3.3 (conservative) / < 5.0	Hair et al. (2019)
Explanatory power	R^2 interpreted contextually (often 0.25/0.50/0.75 as weak/moderate/substantial)	Hair et al. (2019)
Effect size	f^2 ≈ 0.02/0.15/0.35 = small/medium/large	Cohen (1988); Hair et al. (2019)
Predictive relevance	$Q^2 > 0$	Hair et al. (2019)
Hypothesis support	Sign matches theory; bootstrap p < .05; 95% CI excludes 0	Hair et al. (2019, 2022)
Approximate PLS fit	SRMR inspected (CB-SEM-oriented < 0.08 sometimes applied)	Hair et al. (2019)

CB-SEM supplement	RMSEA ≤ 0.06 (close) / ≤ 0.08 (reasonable); CFI/TLI ≥ 0.95; SRMR ≤ 0.08	Browne & Cudeck (1993); Hu & Bentler (1999)

Additional Robustness Analysis

Several supplementary analysis were conducted to evaluated the robustness of the structural findings. First, possible nonlinear relationships were examined by estimating quadratic (PSI) terms for each endogenous construct. Second, possible endogeneity of PSI was assessed using Gaussian copula diagnostics. Third, observed heterogeneity was examined through PLS multi-group analysis (PLS-MGA) across gender and university type. Finally, indicator-level VIFs were inspected for potential collinearity concerns. These robustness tests were treated as supplementary diagnostics analysis and were not used to replace the primary bootstrapped PLS-SEM hypothesis tests.

Supplementary Model-Fit Assessment

PLS-SEM was treated primarily as a variance-based, prediction-oriented approach. Therefor, hypothesis evaluation was based on measurement quality, structural path estimates, explanatory power, effect sizes, predictive relevance, and bootstrapping inference.

Approximately PLS model quality indices were additionally obtained using cSEM. A covariance-based SEM model using the same purified indicators was estimated separately in lavaan as a supplementary sensitivity analysis. The CB-SEM indices were not interpreted as substitutes for the PLS-SEM results and were not used to determine acceptance or rejection of the structural hypothesis. The inferential conclusions of the study were based on the bootstrapped PLS structural estimates.

Result and Data Analysis

A total of 385 Malaysian university students were included in the final analysis. The sample comprised 89 male students (23.1%) and 296 female students (76.9%). Of the respondents, 207 (53.8%) were enrolled in public universities and 178 (46.2%) in private universities. The largest age category was 21–23 years (n = 274), and Year 3 students represented the largest study-year group (n = 193). The sample was predominantly Chinese (n = 282), with the remaining respondents identifying as Malay, Indian, or other ethnic groups. The gender and ethnic imbalance should be considered when interpreting the generalisability of the findings.

Measurement Model Assessment

The initial measurement model consisted of 27 reflective indicators: 10 indicators for PSI, five for LS, six for PA, and six for NA. Indicator reliability was assessed using standardised outer loadings, with .70 used as the principal retention criterion. All five LS indicators exceeded the threshold in the initial model, whereas several PSI, PA, and NA indicators showed weaker loadings. Indicators were therefore reviewed iteratively, beginning with the weakest item, and the model was re-estimated after each deletion.

Table 3 presents the initial outer loadings for all candidate indicators before purification, together with provisional retention decisions based on the .70 benchmark.

Table 3. Initial Outer Loadings

Indicator	**Construct**	**Loading**	**Decision (≥ 0.70?)**
PSI1	PSI	0.710	Retain initially
PSI2	PSI	0.632	Drop candidate
PSI3	PSI	0.683	Drop candidate

PSI4	PSI	0.663	Drop candidate
PSI5	PSI	0.617	Drop candidate
PSI6	PSI	0.663	Drop candidate
PSI7	PSI	0.696	Drop candidate
PSI8	PSI	0.694	Drop candidate
PSI9	PSI	0.544	Drop candidate
PSI10	PSI	0.688	Drop candidate
LS1	LS	0.807	Retain
LS2	LS	0.857	Retain
LS3	LS	0.844	Retain
LS4	LS	0.786	Retain
LS5	LS	0.736	Retain
PA1	PA	0.784	Retain
PA2	PA	0.809	Retain
PA3	PA	0.731	Retain
PA4	PA	0.806	Retain
PA5	PA	0.753	Retain
PA6	PA	0.632	Drop candidate
NA1	NA	0.803	Retain
NA2	NA	0.836	Retain
NA3	NA	0.808	Retain
NA4	NA	0.693	Drop candidate
NA5	NA	0.576	Drop candidate
NA6	NA	0.600	Drop candidate

Nine indicators were eventually removed during the purification process: PSI2, PSI3, PSI4, PSI5, PSI6, PSI9, PA6, NA5, and NA6. The final model retained PSI1, PSI7, PSI8, and PSI10 for PSI; LS1–LS5 for LS; PA1–PA5 for PA; and NA1–NA4 for NA. All retained outer loadings exceeded .70, ranging from .710 to .872. Although the purified PSI construct met the prespecified empirical criteria, removing six of the original 10 PSI items narrowed its content coverage. The retained indicators primarily represented friend-like comfort, attachment during absence, desire for in-person contact, and attraction; therefore, the purified PSI construct should be interpreted as a narrower operationalization of the original scale rather than as full confirmation of its original content domain.

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Table 4 documents the sequence of indicator deletions across re-estimation cycles, including the loading observed at the moment of removal.

Table 4. Dropped Indicators

Iteration	Dropped item	Construct	Loading at deletion	Reason
1	PSI9	PSI	0.544	Outer loading < 0.70
2	NA5	NA	0.582	Outer loading < 0.70
3	NA6	NA	0.604	Outer loading < 0.70
4	PSI5	PSI	0.626	Outer loading < 0.70
5	PA6	PA	0.633	Outer loading < 0.70
6	PSI2	PSI	0.631	Outer loading < 0.70
7	PSI4	PSI	0.653	Outer loading < 0.70
8	PSI3	PSI	0.677	Outer loading < 0.70
9	PSI6	PSI	0.695	Outer loading < 0.70

Table 5 reports the purified outer loading for all retained indicators.

Table 5. Final Outer Loadings

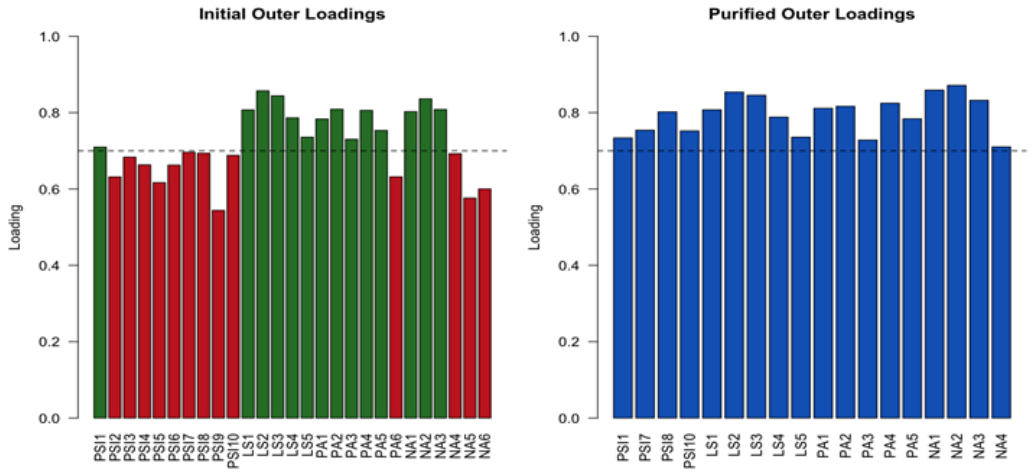
Indicator	Construct	Loading
PSI1	PSI	0.734
PSI7	PSI	0.754
PSI8	PSI	0.802
PSI10	PSI	0.752
LS1	LS	0.807
LS2	LS	0.854
LS3	LS	0.846
LS4	LS	0.788
LS5	LS	0.736
PA1	PA	0.811
PA2	PA	0.817
PA3	PA	0.728

PA4	PA	0.825
PA5	PA	0.784
NA1	NA	0.859
NA2	NA	0.872
NA3	NA	0.832
NA4	NA	0.710

The final measurement model therefor demonstrated satisfactory indicator reliability. PSI8 showed the highest loading for the PSI construct (.802), LS2 for life satisfaction (.854), PA4 for positive affect (8.25), and NA2 for negative affect (.872).

Figure 1 compares outer loadings before and after purification to visualize how indicator reliability improved for retained items.

Figure 1. Initial Versus Final Outer Loadings



Indicator purification followed a strict loading threshold of 0.70, consistent with contemporary PLS-SEM reporting standards for reflective measures (Hair et al., 2019). After purification, every retained loading exceeded 0.70 (range = 0.710 – 0.872), satisfying the recommended indicator reliability criterion before convergent validity, discriminant validity, reliability estimation, structural evaluation, hypothesis testing, and robustness test proceeded exclusively on the purified model.

Internal Consistency and Convergent Validity

Internal consistency was assessed using Cronbach's alpha, Dijkstra-Henseler's rho_A, and composite reliability (rho_C). Convergent validity was evaluated using average variance extracted (AVE).

Table 6 summarizes internal consistency reliability and convergent validity for the four purified constructs.

Table 6. Internal Consistency Reliability and Convergent Validity

Construct	**Cronbach's α**	**rho_A**	**Composite reliability (rho_C)**	**AVE**
PSI	0.758	0.759	0.846	0.579

LS	0.866	0.871	0.903	0.652
PA	0.853	0.861	0.895	0.630
NA	0.844	0.885	0.891	0.674

Thresholds: α, rho_A, and CR ≥ 0.70; AVE ≥ 0.50 (Hair et al., 2019).

All constructs exceeded the recommended .70 criterion for internal consistency. Composite reliability ranged from .846 to .903, while AVE ranged from .579 to .674 exceeding the .50 criterion for convergent validity. These results indicate satisfactory reliability and convergent validity across the four constructs.

Discriminant Validity

Discriminant validity was assessed using both the Fornell-Lacker criterion and the heterotrait-monotrait ration of correlations (HTMT). Under the Fornell-Lacker criterion, the square root of the AVE for each construct was larger than its correlations with the other constructs. The largest absolute inter-construct correlation was observed between LS and PA (r = .494), which remained lower than the respective square roots of AVE.

Table 7 evaluates discriminant validity using the Fornell-Larcker criterion, with the square root of AVE on the diagonal and inter-construct correlations off-diagonal.

Table 7. Fornell-Larcker Criterion

Construct	**PSI**	**LS**	**PA**	**NA**
PSI	0.761			
LS	0.439	0.807		
PA	0.346	0.494	0.794	
NA	−0.176	−0.200	−0.418	0.821

HTMT values ranged from .205 to .571 and were therefore substantially below the conservative threshold of .85.

Table 8 reports heterotrait-Monotrait Ratios (HTMT) as a contemporary to the Fornell-Larcker asessment.

Table 8. Heterotrait-Monotrait Ratio (HTMT)

Pair	**HTMT**
LS–PSI	0.534
PA–PSI	0.423
NA–PSI	0.205
PA–LS	0.571
NA–LS	0.227
NA–PA	0.482

The highest HTMT value was .571 between LS and PA, indicating that although these constructs were related as components of subjective wellbeing, they remained empirically distinguishable. Overall, the measurement model demonstrated satisfactory discriminant validity.

Structural Model Assessment

Following establishment of satisfactory measurement model properties, the structural model was assessed to determine the relationships between PSI and the three dimension of SWB.

The coefficient of determination (R^2) indicated that PSI explained 19.3% of the variance in life satisfaction, 11.9% of the variance in positive affect, and 3.1% of the variance in negative affect. The very low R^2 for negative affect indicates that PSI accounted for only a small proportion of individual differences in negative affect and that other psychological and contextual factors are likely to be more important predictors.

Table 9 presents R^2, adjusted R^2, effect size f^2, and Stone-Geisser Q^2 for each endogenous construct.

Table 9. Explanatory Power, Effect Size, and Predictive Relevance

Endogenous construct	**R^2**	**Adj. R^2**	**f^2 (PSI → DV)**	**f^2 interpretation**	**Q^2 (structural redundancy)**
LS	0.193	0.191	0.239	Medium	0.116
PA	0.119	0.117	0.136	Small	0.066
NA	0.031	0.029	0.032	Small	0.004

The effect of PSI on life satisfaction was medium (f^2 = .239), whereas its effects on positive affect (f^2 = .136) and negative affect (f^2 = .032) were small. All Q^2 values were above zero, indicating some predictive relevance for the three endogenous constructs; however, predictive relevance for negative affect was minimal (Q^2 = .004).

Indicator VIF values ranged from 1.334 to 2.488 and remained below the conservative threshold of 3.3, indicating no substantial collinearity concern in the purified measurement model.

Model-Fit Diagnostics

Approximate PLS model-quality indices were also examined. The PLS-based SRMR was .122 and NFI was .799. Because the SRMR exceeded commonly cited reference values, approximate global fit of the PLS model was not strong and should be interpreted cautiously. PLS-SEM is primarily prediction oriented, so global fit indices were treated as supplementary rather than as the sole basis for model evaluation; nevertheless, the elevated SRMR was retained as a limitation rather than dismissed.

As a supplementary sensitivity analysis, a covariance-based SEM model was estimated using the same purified indicators. The CB-SEM model produced RMSEA = .048, CFI = .962, TLI = .954, and SRMR = .042, indicating satisfactory fit under conventional CB-SEM criteria. These supplementary results provide useful sensitivity evidence but do not eliminate the concern raised by the higher PLS-based SRMR. Hypothesis decisions therefore remained based on the bootstrapped PLS structural estimates.

Table 10 reports approximate PLS fits indices from cSEM alongside a CB-SEM supplementary assessment on the same purified indicators using lavaan.

Table 10. Model Fit Indices

Index	**Value**	**Source**	**Common reference cutoff**

SRMR	0.122	PLS (`cSEM`)	Often < 0.08 (conservative) / < 0.10 (acceptable in some PLS applications)
NFI	0.799	PLS (`cSEM`)	Higher is better; often > 0.90 in CB-SEM
RMSEA	0.098	PLS (`cSEM` approximate)	See CB-SEM row for primary RMSEA interpretation
CFI	0.833	PLS (`cSEM` approximate)	See CB-SEM row
NNFI/TLI	0.806	PLS (`cSEM` approximate)	See CB-SEM row
RMSEA	0.048	CB-SEM supplement (`lavaan`)	≤ 0.06 close fit; ≤ 0.08 reasonable (Browne & Cudeck, 1993; Hu & Bentler, 1999)
CFI	0.962	CB-SEM supplement (`lavaan`)	≥ 0.95 (Hu & Bentler, 1999)
TLI	0.954	CB-SEM supplement (`lavaan`)	≥ 0.95 (Hu & Bentler, 1999)
SRMR	0.042	CB-SEM supplement (`lavaan`)	≤ 0.08 (Hu & Bentler, 1999)

Hypothesis Testing

Hypothesis were evaluated using 5,000 bootstrap resamples. A structural relationship was considered statistically supported when the path coefficient was in the hypothesized direction, p<.05, and the 95% confidence interval did not contain zero.

Table 11 reports the bootstrapped direct effects together with the corresponding hypothesis decisions of H1-H3. Because the structural model specifies no mediators, indirect effects are not estimated and total effects are identical to the direct paths in Table 11. Hypothesis decisions therefore rest solely on these direct-effect estimates.

Table 11. Direct Effects and Hypothesis Decisions

Hypothesis	**Path**	**Expected sign**	**β**	***t***	**95% CI**	***p***	**Decision**
H1	PSI → LS	Positive	0.439	8.204	[0.333, 0.545]	.000	H1 SUPPORTED (accepted)
H2	PSI → PA	Positive	0.346	6.900	[0.252, 0.446]	.000	H2 SUPPORTED (accepted)
H3	PSI → NA	Negative	−0.176	−3.332	[−0.290, −0.092]	.004	H3 SUPPORTED (accepted)

The results supported H1, demonstrating a positive relationship between vlog-based PSI and life satisfaction (β = .439, *t* = 8.204, *p*<.001). Among the three structural paths, the relationship between PSI and LS was the strongest. Students supporting stronger parasocial connections with their favourite vloggers tended to report higher satisfaction.

H2 was also supported. PSI showed a significant positive relationship with positive affect (β = .346, *t* = 6.900, *p*<.001), indicating that stronger vlog-based parasocial engagement was associated with greater positive emotional experience.

Finally, H3 was supported. PSI was negatively associated with negative affect (β = -.176, t = 3.332, p<.001), suggesting that stronger parasocial interaction was associated with lower negative affect. However, this relationship was weaker in magnitude than those observed for life satisfaction and positive effect.

Because no mediator was included in the structural model, no indirect effects were estimated. Consequently, the total effects were identical to the direct effect: .439 for PSI → LS, .346 for PSI → PA, and -.176 for PSI → NA.

Robustness Analysis

Additional analysis were performed to determine whether the main structural findings were sensitive to nonlinearity, endogeneity, respondent heterogeneity, or collinearity.

The quadratic effects for LS (β = .031, p =.493) and NA (β = .004, p =.934) were nonsignificant, supporting an approximately linear specification for these relationships. However, the quadratic PSI^2 → PA effect was small but statically significant (β = .077, p =.027). The original linear PSI → PA relationship nevertheless remained positive and significant after the quadratic term was introduced, indicating that the principal H2 relationship remained robust despite mild curvature.

Table 12 presents quadra-effects estimates that probe potential nonlinearity in the PSI relationships, as recommended when researchers wish to assess whether linear path assumptions are tenable (Hair et al., 2022).

Table 12. Quadratic Effects (PSI^2)

Path	**β**	**95% CI**	***p***	**Implication**
PSI → LS	0.467	[0.372, 0.563]	.000	Linear term remains significant
PSI → PA	0.414	[0.310, 0.520]	.000	Linear term remains significant
PSI → NA	−0.172	[−0.306, −0.040]	.022	Linear term remains significant
PSI^2 → LS	0.031	[−0.051, 0.122]	.493	No significant nonlinearity
PSI^2 → PA	0.077	[0.008, 0.154]	.027	Mild quadratic signal
PSI^2 → NA	0.004	[−0.091, 0.092]	.934	No significant nonlinearity

Gaussian copula testing indicated no significant endogeneity signal for LS (p =.371) or NA (p =.806). A significant copula term was identified for PA (p =.036), suggesting possible omitted-variance bias or simultaneity for the PSI-PA relationship. Consequently, this relationship should be interpreted as associational rather than causal.

Table 13 reports Gaussian copula tests that screen for potential endogeneity of PSI with respect to each endogenous construct (Park & Gupta, 2012; Hult et al., 2018; Hair et al., 2022).

Table 13. Gaussian Copula Endogeneity Tests

Dependent construct	**Copula term *p***	**Endogeneity signal**
LS	.371	No significant signal
PA	.036	Possible endogeneity concern
NA	.806	No significant signal

Multi-group analysis further examined whether the structural relationships differed accodring to gender and university type. No significant gender differences were found for PSI → LS (p_diff =.566) or PSI → PA (p_diff =.262). However, the PSI → NA relationship differed significantly by gender (p_diff =.0.14). The negative relationship was stronger among male students (β = -.417, p <.001) than among female students (β = -.126, p =.087)

Table 14 reports the gender-based heterogeneity analysis, including within group path estimates and the between group differences tests.

Table 14. Observed Heterogeneity: Gender PLS-MGA

Path	**β Female (SE)**	***t* / *p* Female**	**β Male (SE)**	***t* / *p* Male**	**Δβ (F−M)**	***t*_diff**	***p*_diff**	**Heterogeneity**
PSI → LS	0.425 (0.064)	6.699 / <.001	0.489 (0.090)	5.437 / <.001	−0.063	−0.573	.566	No
PSI → PA	0.323 (0.058)	5.541 / <.001	0.436 (0.082)	5.330 / <.001	−0.113	−1.121	.262	No
PSI → NA	−0.126 (0.073)	−1.713 / .087	−0.417 (0.094)	−4.452 / <.001	0.292	2.452	.014	Yes

Table 15 reports the university heterogeneity analysis for public and private universities.

Table 15. Observed Heterogeneity: University PLS-MGA

Path	**β Public (SE)**	**t / p Public**	**β Private (SE)**	**t / p Private**	**Δβ (Pub−Priv)**	***t*_diff**	***p*_diff**	**Heterogeneity**
PSI → LS	0.459 (0.070)	6.594 / <.001	0.447 (0.074)	6.076 / <.001	0.012	0.117	.907	No
PSI → PA	0.306 (0.065)	4.746 / <.001	0.441 (0.072)	6.149 / <.001	−0.135	−1.400	.162	No
PSI → NA	−0.152 (0.102)	−1.489 / .137	−0.247 (0.079)	−3.134 / .002	0.095	0.734	.463	No

Table 16 summarizes indicator collinearity diagnosis for the purified measurement model, reporting the minimum and maximum VIF for each construct.

Table 16. Indicator Collinearity (VIF)

Construct	**Indicators**	**Min VIF**	**Max VIF**
PSI	PSI1, PSI7, PSI8, PSI10	1.334 (PSI1)	1.689 (PSI8)
LS	LS1–LS5	1.618 (LS5)	2.488 (LS2)
PA	PA1–PA5	1.606 (PA3)	2.072 (PA4)
NA	NA1–NA4	1.659 (NA4)	2.113 (NA2)

Overall (all indicators)	18 retained indicators	1.334	2.488

Summary of Findings

Overall, the purified PLS-SEM model demonstrated satisfactory internal consistency, convergent validity, and discriminant validity, and all three hypothesized structural relationships were statistically supported. Vlog-based PSI showed its strongest association with life satisfaction, followed by positive affect, while its association with negative affect was weaker. These findings should be interpreted alongside the narrower content coverage of the purified PSI scale and the modest explanatory power for the affective outcomes.

Stronger vlog-based parasocial interaction among Malaysian university students was associated with higher life satisfaction, greater positive affect, and lower negative affect. However, the robustness analyses identified important boundary conditions, particularly possible endogeneity for positive affect and gender heterogeneity in the PSI–negative affect relationship. In addition, PSI explained only 3.1% of the variance in negative affect. Together, these findings support a multidimensional treatment of subjective well-being while cautioning against interpreting PSI as a uniform or causal determinant of well-being.

DISCUSSION

The present study examined the relationship between vlog-based parasocial interaction and three dimensions of subjective well-being among Malaysian university students. The PLS-SEM findings supported all three hypotheses: stronger parasocial interaction with a favourite vlogger was associated with greater life satisfaction, higher positive affect, and lower negative affect. The strength of these relationships differed across the three dimensions, indicating that PSI is not uniformly related to the cognitive and affective components of subjective well-being. The findings should also be considered in light of the convenience sample, measurement purification, and robustness diagnostics.

Parasocial Interaction and Life Satisfaction

H1 was supported, showing that vlog-based parasocial interaction was positively associated with life satisfaction ($\beta = 0.439$, $p < .001$, $f^2 = 0.239$). Among the three relationships examined in this study, the association between parasocial interaction and life satisfaction was the strongest, with a medium effect size. This finding suggests that students who experience stronger friend-like connections with their favourite vloggers also tend to evaluate their overall lives more positively.

The present finding is consistent with previous research demonstrating a positive relationship between parasocial interaction and life satisfaction. Khan et al. (2023) reported a significant positive correlation between celebrity-persona parasocial interaction and life satisfaction among university students, with parasocial interaction also mediating the relationship between media exposure and life satisfaction. Similarly, Mellisa and Tiatri (2024), using the Satisfaction With Life Scale together with affective indicators of well-being among early adults who followed TikTok influencers, found a significant positive association between parasocial interaction and subjective well-being, although the observed relationship was relatively weak ($r = .127$).

The result is also consistent with broader literature suggesting that parasocial relationships may provide psychological and social benefits. Hoffner and Bond (2022) concluded that parasocial relationships developed through social media can contribute to feelings of connection, facilitate coping, and support different dimensions of well-being. Likewise, Li et al. (2026), through a systematic review and meta-analysis, reported a positive pooled association between influencer-directed parasocial engagement and well-being outcomes ($r \approx .42$), with positive mental-health associations generally stronger than negative associations. Wang and Shang (2024) further demonstrated that social and parasocial online relationships are relevant to university students' well-being, although these relationships may depend on algorithm awareness and compulsive media use.

Nevertheless, the positive relationship observed in the present study has not been consistently reported across previous research. Ravi and Patki (2025), for example, found no significant relationship between the intensity of parasocial relationships and psychological well-being among Indian youth. One possible explanation is that

their study conceptualised well-being in terms of broader eudaimonic psychological functioning, whereas the present study examined life satisfaction as a cognitive-evaluative component of subjective well-being. Differences in cultural context, sample characteristics, media platforms, and the operationalisation of well-being may therefore contribute to variation across findings.

Furthermore, Baek et al. (2013) cautioned that dependence on one-sided celebrity-oriented relationships on social networking sites may coexist with greater loneliness rather than improved well-being. This highlights the potentially complex nature of parasocial engagement. The present medium-sized positive association should therefore not be interpreted as evidence that all forms of parasocial interaction improve life satisfaction; rather, it supports a beneficial association within this sample while remaining compatible with the broader view that parasocial relationships may have different consequences across individuals, media environments, and psychological outcomes.

Parasocial Interaction and Positive Affect

H2 was also supported, indicating a significant positive relationship between vlog-based parasocial interaction and positive affect ($\beta = 0.346$, $p < .001$, $f^2 = 0.136$). Although the magnitude of this relationship was smaller than that observed for life satisfaction, the finding indicates that students reporting stronger parasocial interaction with their favourite vloggers also tended to experience more positive emotional states.

This relationship is consistent with the proposition that parasocial relationships can function as psychological resources for emotional regulation. Lotun et al. (2024) demonstrated that individuals perceived strong parasocial relationships, including relationships with YouTube creators, as more effective in satisfying emotional needs than relatively weak face-to-face relationships with acquaintances. Although parasocial relationships were still perceived as less effective than close reciprocal relationships, their findings indicate that one-sided media relationships can nevertheless fulfil meaningful emotional functions.

Similarly, Hartmann and Goldhoorn (2011) experimentally demonstrated that stronger momentary parasocial experiences were associated with greater enjoyment during media exposure. Such enjoyment provides a plausible proximal mechanism through which parasocial interaction may correspond with increased positive feelings. Hoffner and Bond (2022) also identified coping, emotional support, and a sense of community as potential pathways through which social media parasocial relationships may contribute to well-being.

Furthermore, Li et al. (2026) reported that parasocial engagement was reliably associated with positive and adaptive mental health outcomes. Their meta-analytic findings also suggested that associations involving parasocial interaction may be particularly strong compared with broader measure of parasocial relationships. In addition, Xu (2021) demonstrated that parasocial relationships can mediate the relationships between perceived interactivity, self-disclosure, and psychological well-being in intimate vlog-viewing contexts. Taken together, these findings provide support for interpreting vlog-based parasocial interaction as a possible source of positive emotional experience.

However, the positive relationship should be interpreted cautiously. Ravi and Patki (2025) reported no significant relationship between parasocial relationship intensity and psychological well-being, demonstrating that stronger parasocial relationships do not necessarily correspond with positive psychological outcomes in all populations or contexts.

The robustness analyses suggest a more nuanced interpretation of H2. A mild quadratic relationship was detected between PSI and positive affect, and the Gaussian copula term for the positive-affect equation was significant ($p = .036$), indicating possible endogeneity. The PSI–positive affect relationship should therefore be interpreted as associational rather than causal. Unmeasured variables such as extraversion, offline social support, loneliness, emotion-regulation tendencies, or motivations for viewing vlogs may influence both parasocial interaction and positive affect.

Overall, the findings support the view that parasocial interaction with vloggers may be associated with positive emotional experiences among university students. Nevertheless, the relationship is likely to operate within a

broader network of individual, social, and media related factors rather than functioning as an isolated determinant of positive affect.

Parasocial Interaction and Negative Affect

H3 was supported, demonstrating a significant negative relationship between vlog-based parasocial interaction and negative affect ($\beta = -.176$, $p = .004$, $f^2 = .032$). Students who reported stronger parasocial interaction with their favourite vloggers tended to report lower negative affect. However, this was a small effect, and PSI explained only 3.1% of the variance in negative affect ($R^2 = .031$), indicating limited explanatory power.

The negative association between PSI and negative affect is consistent with an emotion regulation interpretation of parasocial relationships. Lotun et al. (2024) found that strong parasocial relationships were perceived as useful resources for fulfilling emotional needs and regulating distress, particularly when compared with relatively weak real life acquaintances. Hoffner and Bond (2022) similarly noted that parasocial relationship may facilitate coping and alleviate certain forms of psychosocial burden, although they also aknowledged potential negative consequences associated with media based social comparison.

The present pattern also corresponds with the findings reported by Li et al. (2026), who concluded that positive well-being associations of parasocial engagement generally outweighed negative mental health associations. This asymmetry is reflected in the current study, where the relationships between PSI and life satisfaction and positive affect were stronger than the relationship between PSI and negative affect.

Additional evidence illustrating the complexity of this relationship comes from Zhang et al. (2024). Their findings showed that wishful identification with influencer content could negatively influence well-being. However, stronger parasocial relationships attenuated this harmful pathway within vlog-oriented content. This finding suggests that a close, friend-like parasocial connection should not automatically be equated with maladaptive comparison or identification. Under certain conditions, the perceived closeness associated with parasocial engagement may serve a different psychological function from harmful upward comparison.

Nevertheless, the present result should be considered alongside research demonstrating potential psychological costs of parasocial and influencer engagement. Baek et al. (2013) associated parasocial dependency on social networking sites with greater loneliness, while Hoffner and Bond (2022) identified negative self-comparison as one potential route through which parasocial engagement may adversely affect psychological well-being.

The small effect size and low R^2 indicate that parasocial interaction is unlikely to be a major determinant of negative affect among university students. Negative emotional experiences are likely to be shaped by a broader range of factors, including academic stress, interpersonal difficulties, loneliness, financial concerns, offline social support, and emotion-regulation processes. PSI may therefore represent only a modest correlate of negative affect rather than a dominant explanatory factor.

The multi-group findings further qualify this relationship. The negative PSI → NA pathway was significantly stronger among male than female students ($p_diff = .014$). However, the sample was substantially imbalanced by gender, with females comprising 76.9% of participants. This subgroup difference should therefore be treated as exploratory and requires replication in more balanced samples. No significant between-group differences were detected by university type.

Overall Interpretation

The findings demonstrate that vlog-based parasocial interaction is associated with subjective well-being across both cognitive and affective dimensions, but the pattern is not uniform. The strongest relationship emerged for life satisfaction, followed by positive affect, whereas the relationship with negative affect was substantially weaker. This gradient reinforces the value of analysing subjective well-being as a multidimensional construct rather than collapsing the outcomes into a single global score.

This pattern is consistent with the meta-analytic evidence reported by Li et al. (2026), which suggests that positive well-being outcomes associated with parasocial engagement are generally more robust than associations

involving psychological distress. The findings also align with Hoffner and Bond (2022), who conceptualize parasocial relationships as psychologically meaningful connections that may provide social and emotional benefits while simultaneoursly carrying potential risks.

The present results should not be interpreted as evidence that parasocial interaction is universally beneficial. Previous studies have reported null or negative relationships between parasocial engagement and well-being (Baek et al., 2013; Ravi & Patki, 2025; Zhang et al., 2024). Rather than contradicting the present findings, these differences highlight the importance of outcome definition, platform affordances, comparison processes, sample composition, and unmeasured social or psychological factors.

Within the context of Malaysian university students, stronger friend-like relationships with favourite vloggers were associated with a generally more favourable subjective well-being profile. Nevertheless, this interpretation is bounded by the cross-sectional design, the convenience sample, the reduced PSI indicator set, the possible endogeneity of the positive-affect model, and the low explanatory power for negative affect.

Limitations and Future Directions

The findings should be interpreted within several limitations. First, participants were recruited through convenience sampling, and the sample was unevenly distributed by gender (76.9% female) and ethnicity (predominantly Chinese). These characteristics limit population-level generalisation and also warrant caution when interpreting subgroup differences. Second, the cross-sectional, self-report design cannot establish temporal or causal direction and remains susceptible to common-method and social-desirability bias.

Third, measurement purification removed nine indicators, including six of the original 10 PSI items. Although the retained four-item PSI specification achieved acceptable reliability, convergent validity, and discriminant validity, it primarily represented friend-like comfort, attachment during absence, desire for in-person contact, and attraction. The purified construct therefore provides narrower content coverage than the original scale and should be revalidated in an independent sample before being treated as a stable shortened form. Fourth, the PLS-based SRMR of .122 indicated less favourable approximate global fit, even though the supplementary CB-SEM sensitivity analysis showed acceptable fit.

Fifth, PSI explained only 3.1% of the variance in negative affect ($Q^2 = .004$), indicating limited explanatory and predictive relevance for this outcome. The Gaussian copula test also identified possible endogeneity for positive affect ($p = .036$), suggesting that omitted variables may partly account for the observed PSI–PA association. Future research should use longitudinal, experience-sampling, or multi-wave designs; recruit more demographically balanced samples; validate the PSI measurement structure; and incorporate additional variables such as perceived social support, loneliness, and emotion regulation to clarify mechanisms linking vlog-based parasocial relationships with well-being.

CONCLUSION

This study examined the relationship between vlog-based parasocial interaction and multidimensional subjective wellbeing among Malaysian university students using PLS-SEM (n=385). By distinguishing subjective wellbeing into life satisfaction, positive affect, and negative affect, the study provides a more differentiated understanding of how students' perceived relationships with vloggers are associated with their cognitive and emotional wellbeing. The findings supported all three proposed relationships: stronger parasocial interaction was associated with higher life satisfaction and positive affect, while also associated with lower negative affect. Among these relationships, the strongest association was observed for life satisfaction, followed by positive affect, whereas the relationship with negative affect was comparatively weaker.

These findings suggest that parasocial relationships with vloggers may represent more than simple entertainment-based engagement. For some university students, a perceived friend-like connection with a favourite vlogger may be associated with favourable evaluations of life and more positive emotional experiences. Nevertheless, the relatively small relationship between parasocial interaction and negative affect indicates that vlog-based relationships are unlikely to account for a substantial proportion of students' negative emotional

experiences. Such experiences are likely to be influenced by a wider range of academic, interpersonaly, financial, and psychosocial factors.

The findings should therefore not be interpreted as evidence that parasocial interaction directly improves wellbeing. The cross-sectional design does not establish causal direction, and the robustness analysis identified additional complexities, including mild nonlinearity and possible endogeneity in the relationship with positive affect, as well as gender differences in the relationship between parasocial interaction and negative affect. Furthermore, measurement-model purification substantially reduced the original PSI indicators, indicating the need to reassess the measurement structure in independents samples.

Despite these limitations, the study contributes to parasocial interaction research by extending its application beyond consumer and marketing outcomes to a multidimensional psychological wellbeing framework within the Malaysian university context. The findings demonstrate that the relationship between parasocial interaction and wellbeing is not uniform across different dimensions of subjective wellbeing. Future research should employ longitudinal or experience sampling designs, examine possible mediating mechanism such as perceived social support, coping, social comparison, envy, and wishful identification, and investigate whether the relationships differ across media platforms, vlog genres, gender groups, and cultural contexts.

Overall, vlog-based parasocial interaction appears to be a meaningful but context-dependent correlate of subjective wellbeing among Malaysian university students. Understanding both its potential benefits and limitations is increasingly important as digitally mediated relationships become an integral part of young adults' everyday social and emotional experiences.

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