Metacognitive Beliefs, Perceived Stress, and Resilience among Malaysian School Counsellors: The Role of Counselling Self-Efficacy Sources

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ABSTRACT

Background: School counsellors encounter substantial psychological and occupational demands that may influence their perceived stress and psychological resilience. Although metacognitive beliefs have been associated with psychological distress, their relationships with stress and resilience among Malaysian school counsellors, particularly the moderating role of sources of counselling self-efficacy, remain insufficiently understood.

Objective: This study examined the associations between metacognitive beliefs, perceived stress, and psychological resilience and investigated whether sources of counselling self-efficacy moderated these relationships among Malaysian secondary school counsellors.

Methods: A cross-sectional correlational study was conducted among 252 secondary school counsellors in Sarawak, Malaysia, recruited through an attempted census of 309 eligible counsellors (participation rate: 81.6%). Data were collected using four established self-report instruments. Confirmatory factor analysis and covariance-based structural equation modelling were employed to evaluate measurement properties and direct associations. Continuous-variable interaction regression models were specified to examine moderation, adjusting for age, gender, and professional counselling experience, with school-cluster-robust standard errors.

Results: Metacognitive beliefs were positively associated with perceived stress ($\beta = 0.601$, $p < .001$) and psychological resilience ($\beta = 0.673$, $p < .001$). The reported interaction between metacognitive beliefs and sources of counselling self-efficacy was negative for perceived stress ($b = -0.310$, 95% CI [−0.400, −0.220], $p < .001$) and positive for psychological resilience ($b = 0.402$, 95% CI [0.305, 0.498], $p < .001$). These findings suggest that the associations between metacognitive beliefs and psychological outcomes varied according to sources of counselling self-efficacy.

Conclusion: Sources of counselling self-efficacy may represent an important contextual resource in understanding the relationships of metacognitive beliefs with perceived stress and psychological resilience among school counsellors. The findings highlight the potential relevance of integrating metacognitive and efficacy-related perspectives into future research on counsellor well-being. Longitudinal investigations are warranted to clarify temporal relationships and potential underlying mechanisms.

Keywords: Metacognitive beliefs; perceived stress; psychological resilience; sources of counselling self-efficacy; school counsellors; moderation; Malaysia.

1. INTRODUCTION

School counsellors play an essential role in supporting students' psychological well-being, academic development, and career readiness (Ooi et al., 2017). Their responsibilities increasingly encompass behavioural difficulties, interpersonal problems, and mental health concerns alongside administrative and institutional demands (Fye et al., 2018; Leslie et al., 2026). Such demands may contribute to perceived stress,

emotional exhaustion, and burnout, potentially compromising counsellors' well-being and professional functioning (Mullen & Gutierrez, 2016; Pamuk, 2025). In a study of 1,443 Chinese school counsellors, organizational support, occupational empowerment, and satisfaction of basic psychological needs were associated with occupational well-being (Feng et al., 2024). Research following the COVID-19 pandemic has likewise highlighted increasing psychosocial demands and the potential protective value of collegial support and self-care (Vera & Heineke, 2024). Understanding the cognitive and psychological resources associated with counsellors' stress and adaptive functioning is therefore important.

In Malaysia, school counsellors must respond to students' complex needs while meeting educational policies and institutional expectations. Studies have examined self-compassion, counselling self-efficacy, emotional intelligence, and spiritual intelligence in relation to counsellors' psychological functioning (Bali-Mahomed et al., 2022; Chow et al., 2024). Counselling self-efficacy has also been linked to attitudes towards tele-mental health services (Lee et al., 2025). However, professional competence and efficacy-related resources do not necessarily eliminate stress or emotional exhaustion (Lim et al., 2025; Turner et al., 2025). A fuller account of counsellors' psychological functioning requires attention to cognitive vulnerability alongside adaptive resources, particularly in relation to perceived stress and resilience.

Metacognitive beliefs may help explain individual differences in psychological distress. Unlike metacognitive skills, which concern monitoring and regulating cognition, metacognitive beliefs involve evaluations of the usefulness, significance, controllability, and consequences of thoughts (Wells & Cartwright-Hatton, 2004). The Self-Regulatory Executive Function model proposes that dysfunctional metacognitive beliefs sustain distress through the Cognitive Attentional Syndrome, characterized by perseverative thinking and maladaptive attentional and coping strategies (Wells & Matthews, 1996; Wells, 2000). Empirical studies have associated maladaptive metacognitive beliefs with negative affect, emotion dysregulation, and anxiety and depressive symptoms (Cano-López et al., 2024, 2026; Mansueto et al., 2024; Thingbak et al., 2024). Longitudinal findings further suggest associations with interpersonal distress beyond concurrent anxiety and depression (Strand et al., 2026). However, these findings arise largely outside school counselling populations, leaving their relevance to Malaysian school counsellors insufficiently understood.

Psychological resilience represents a related but distinct dimension of counsellors' functioning. Resilience concerns the capacity to adapt to adversity and maintain or recover functioning under demanding circumstances, and previous research has linked resilience-related resources with counsellors' adjustment and well-being (Arnout & Almoied, 2021; Litam et al., 2021; Vera & Heineke, 2024). Cognitive interpretations of challenging situations and perceived coping resources may contribute to resilience (Hagen et al., 2020). Nevertheless, existing evidence does not establish whether particular metacognitive beliefs are associated with resilience among school counsellors. Importantly, resilience and perceived stress are not simply opposite ends of one continuum: counsellors may report substantial stress while retaining meaningful adaptive resources. Examining both outcomes together may therefore clarify the potentially different associations of metacognitive beliefs with psychological vulnerability and adaptation.

Sources of counselling self-efficacy may further shape these associations. According to Social Cognitive Theory, self-efficacy refers to beliefs about one's capacity to organize and execute actions required to manage situations (Bandura, 1997). Efficacy-related beliefs may influence the appraisal of challenges and the use of self-regulatory strategies (Zimmerman & Cleary, 2006). Malaysian studies have established the relevance of counselling self-efficacy to professional functioning (Ooi et al., 2018, 2020), while broader research has associated self-efficacy with burnout and occupational stress (Makara-Studzińska et al., 2019; Niles et al., 2024). These findings suggest that the relationships of metacognitive beliefs with perceived stress and resilience may vary across levels of efficacy-related resources. However, an association between self-efficacy and well-being does not itself demonstrate moderation; this proposition requires direct empirical testing.

Three research gaps motivate the present study. First, research on school counsellors has emphasized burnout, occupational well-being, and counselling self-efficacy, while giving comparatively limited attention to metacognitive beliefs as correlates of psychological functioning (Bali-Mahomed et al., 2022; Feng et al., 2024; Niles et al., 2024). Second, evidence linking maladaptive metacognitive beliefs with distress in other populations has not established how these beliefs relate simultaneously to perceived stress and resilience

among Malaysian school counsellors (Cano-López et al., 2024, 2026; Mansueto et al., 2024). Third, although counselling self-efficacy has received attention in Malaysia, it remains unclear whether sources of counselling self-efficacy moderate the associations between metacognitive beliefs and these two outcomes (Ooi et al., 2018, 2020). Addressing these gaps may help integrate cognitive vulnerability and efficacy-related resources within a single analytical framework.

Accordingly, this cross-sectional study examined the associations of metacognitive beliefs with perceived stress and psychological resilience among secondary school counsellors in Sarawak, Malaysia, and tested whether these associations differed by levels of sources of counselling self-efficacy. Drawing on the Self-Regulatory Executive Function model and Social Cognitive Theory, the study offers three contributions. Theoretically, it connects metacognitive beliefs with efficacy-related resources in understanding counsellors' psychological functioning. Empirically, it examines perceived stress and resilience as distinct outcomes and directly evaluates the proposed moderation relationships in a Malaysian counselling population. Practically, the findings may inform future research on supervision, psychological support, and counsellor well-being initiatives. Because the design is cross-sectional, the findings are interpreted as associations rather than causal effects.

2. METHODS

2.1 Study Design and Setting

A cross-sectional, correlational research design was employed in this study (Holtfreter & Demmer, 2026). A self-administered online questionnaire was utilized to collect data between August 2022 and November 2022.

2.2 Participants and Sampling

The study population comprised secondary school counsellors providing school-based guidance and counselling services in Sarawak, Malaysia. The sampling frame was established using information obtained from the Sarawak State Education Department (Jabatan Pendidikan Negeri Sarawak). At the time of data collection, 193 public secondary schools were identified within the study population. Of these, 116 schools employed two counsellors, while the remaining 77 schools employed one counsellor, yielding a total population of 309 counsellors.

A school-based recruitment framework was adopted to facilitate access to counsellors across geographically dispersed educational institutions. Although probability-based cluster sampling is commonly employed in complex survey designs involving geographically distributed populations (Abbas et al., 2025), the present study sought to recruit all eligible counsellors identified within the established sampling frame. Accordingly, an attempted census approach was used rather than randomly selecting a subset of school clusters. All 309 identified counsellors were invited to participate, thereby providing an opportunity for the entire identified population to be represented in the study.

Participants were required to meet the following eligibility criteria: (i) employment as a secondary school counsellor, (ii) direct involvement in providing school-based guidance and counselling services, and (iii) at least one year of professional counselling experience. Recruitment was conducted through official correspondence and electronic communication. School principals and relevant administrators were informed about the study to facilitate access to potential participants. Eligible counsellors were contacted by email and provided with information concerning the study objectives, informed consent procedures, and access to the self-administered online questionnaire. [Specify how eligibility was verified, based on the actual recruitment procedure.]

Of the 309 counsellors invited to participate, 252 provided informed consent and were included in the final analytical sample, yielding a participation rate of 81.6%. The remaining 57 invited counsellors were not included in the analytical sample. Although this participation rate indicates substantial participation within the identified population, a high response rate does not necessarily eliminate nonresponse bias. As Groves (2006) explained, the extent of nonresponse bias depends not only on the proportion of individuals who participate but

also on the extent to which participation is associated with the characteristics under investigation. Therefore, potential differences between respondents and nonrespondents should be considered when interpreting the findings. Furthermore, the use of an online questionnaire may introduce selection-related limitations associated with differential accessibility and participation in web-based surveys (Bethlehem, 2010). These considerations warrant caution when generalizing the findings beyond the participating counsellors, particularly to school counsellors working in other Malaysian states or educational settings.

2.3 Measures

Data were collected by using four established self-report instruments:

i. The Metacognitions Questionnaire-30 (Wells & Cartwright-Hatton, 2004). The questionnaire comprised of 30 items measuring five dimensions of metacognitive beliefs: (1) positive beliefs about worry, (2) negative beliefs about uncontrollability and danger, (3) cognitive confidence, (4) need to control thoughts, and (5) cognitive self-consciousness. Each dimension contains six items rated on a four-point Likert scale ranging from 1 (*do not agree*) to 4 (*agree very much*). Subscale scores are calculated by summing the corresponding six items, yielding scores between 6 and 24, while the overall score ranges from 30 to 120. Higher scores indicate stronger endorsement of the metacognitive beliefs measured

ii. Perceived Stress Scale-10 (Cohen & Williamson, 1988). The scale measures the extent to which individuals perceive situations in their lives as unpredictable, uncontrollable, and overwhelming during the preceding month. It consists of total ten items, with ratings on a five-point Likert scale from 0 (never) to 4 (very often). The scores of 0 to 13, 14 to 26, and 27 to 40 were categorized as low, moderate, and high perceived stress, respectively,

iii. Resilience Scale-25 (Wagnild & Young, 1993). It was employed to assess the level of psychological resilience among counselors. The resilience was conceptualized as a positive personal characteristic that facilitates adaptation to adversity, stress, and challenging life circumstances. This scale comprises 25 positively worded items rated on a seven-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The total resilience score is calculated by summing responses across all 25 items, yielding a possible range of 25 to 175, with higher scores indicating greater psychological resilience.

iv. Sources of Counselling Self-Efficacy Scale–Malaysia (Ooi et al., 2020). It assessed the sources of counseling self-efficacy the counselors. It comprises of 25 items distributed across four dimensions: (1) Mastery Experience (6 items), (2) Vicarious Learning (7 items), (3) Social Persuasion (6 items) and (4) Physiological and Affective States (6 items). Items are rated on a six-point Likert scale ranging from 1 (*definitely false*) to 6 (*definitely true*). The overall score ranges from 25 to 150, with higher scores indicating greater endorsement of the measured sources of counseling self-efficacy.

2.4 Statistical Analysis

Statistical analyses were conducted by using IBM SPSS Statistics and IBM SPSS AMOS (version 24). Covariance-based structural equation modelling was employed. This technique was considered appropriate because it allows the simultaneous estimation of relationships among multiple latent constructs while accounting for measurement error (Kline, 2023). The analytical approach comprised three principal stages: (1) evaluation of the measurement model, (2) estimation of the structural model and (3) exploratory multigroup analysis, as discussed below:

2.4.1 Measurement Model

Confirmatory factor analysis was conducted to evaluate the measurement properties of the constructs and assess the correspondence between the hypothesized factor structure and the observed data (Rogers, 2024). The pooled measurement model incorporated three principal latent constructs: (1) metacognitive beliefs, (2) perceived stress, and (3) psychological resilience. These constructs were measured using the Metacognitions Questionnaire-30, Perceived Stress Scale-10 (PSS-10), and Resilience Scale-25 (RS-25), respectively. The confirmatory factor analysis approach enabled the evaluation of relationships between observed indicators and their underlying latent constructs while accounting for measurement error (Kline, 2023).

The specification of the measurement model was informed by the theoretical and psychometric characteristics of the instruments. The Metacognitions Questionnaire-30 assesses five dimensions of metacognitive beliefs: positive beliefs about worry, negative beliefs about uncontrollability and danger, cognitive confidence, need to control thoughts, and cognitive self-consciousness (Wells & Cartwright-Hatton, 2004). The PSS-10 measures perceived stress using ten items, while the RS-25 assesses psychological resilience using 25 items (Cohen & Williamson, 1988; Wagnild & Young, 1993). The indicators representing these constructs were evaluated through their standardized factor loadings and contribution to overall model fit.

The fourth instrument, the Sources of Counselling Self-Efficacy Scale, was employed to assess the proposed moderating variable rather than being incorporated into the pooled confirmatory factor analysis model. The Sources of Counselling Self-Efficacy Scale comprises four dimensions: mastery experience, vicarious learning, social persuasion, and physiological and affective states (Ooi et al., 2020). Accordingly, the three-construct confirmatory factor analysis model was distinguished from the separate assessment and subsequent use of sources of counselling self-efficacy as a moderator. Model fit was evaluated using multiple indices, including the chi-square statistic (χ^2), degrees of freedom (df), comparative fit index (CFI), Tucker–Lewis index (TLI), normed fit index (NFI), root mean square error of approximation (RMSEA), and the chi-square-to-degrees-of-freedom ratio (χ^2/df). Model evaluation was informed by established methodological recommendations, with CFI and TLI values approaching or exceeding 0.95 and RMSEA values approaching or below 0.06 considered indicative of relatively good model fit. Less stringent values, including CFI and TLI of approximately 0.90 and RMSEA below 0.08, were interpreted as potentially acceptable rather than definitive evidence of model adequacy (Hu & Bentler, 1999; Kline, 2023).

Convergent validity was assessed through standardized factor loadings and average variance extracted (AVE), while construct reliability was evaluated using composite reliability. Composite reliability values of approximately 0.70 or higher and AVE values of 0.50 or higher were considered conventional reference criteria for satisfactory reliability and convergent validity (Fornell & Larcker, 1981; Hair et al., 2019). Discriminant validity was assessed using the Fornell–Larcker criterion by comparing the square root of AVE for each construct with its correlations with other constructs (Fornell & Larcker, 1981). The overall adequacy of the measurement model was determined by considering the combined evidence from model-fit indices, standardized factor loadings, reliability estimates, and convergent and discriminant validity rather than relying exclusively on predetermined statistical thresholds.

2.4.2 Structural Model

Following evaluation of the measurement model, covariance-based structural equation modelling was employed to examine the hypothesized relationships among the principal constructs. The structural model specified two direct pathways: (1) the association between metacognitive beliefs and perceived stress and (2) the association between metacognitive beliefs and psychological resilience. Covariance-based structural equation modelling was considered appropriate for examining these theoretically specified relationships while accounting for measurement error in the latent constructs (Kline, 2023). The structural relationships were evaluated using estimated path coefficients, standard errors, critical ratios, and associated statistical significance levels. Standardized path coefficients were used, where available, to interpret the direction and relative magnitude of the associations. Overall structural model adequacy was assessed using the model-fit indices described in Section 2.4.1. Where available, confidence intervals were also considered to evaluate the precision of the estimated relationships. The interpretation of structural coefficients was guided by the cross-sectional and correlational nature of the study. Accordingly, statistically significant pathways were interpreted as evidence of associations between the constructs rather than causal effects or temporal relationships.

2.4.3 Moderation Analysis

The proposed moderating role of sources of counselling self-efficacy in the relationships between metacognitive beliefs and the two psychological outcomes was evaluated by examining whether the strength or direction of these associations varied according to sources-of-counselling-self-efficacy scores. Moderation is established statistically through evidence that the association between a predictor and an outcome differs across values of a moderating variable (Hayes, 2022). To address the methodological limitations associated

with dichotomizing continuous variables, the revised analytical strategy prioritized the use of sources of counselling self-efficacy as a continuous moderator. Separate regression interaction models were specified for perceived stress and psychological resilience. Each model incorporated metacognitive beliefs, sources of counselling self-efficacy, and their interaction term. The interaction coefficient was used to evaluate whether the relationship between metacognitive beliefs and the corresponding psychological outcome varied significantly across the continuous moderator. This approach retained information contained in the original scores and avoided relying exclusively on artificial lower- and higher-scoring groups (Hayes, 2022; MacCallum et al., 2002).

Composite scores for metacognitive beliefs, perceived stress, resilience, and counselling self-efficacy were calculated and standardized. Perceived stress used the nine items retained after confirmatory factor analysis refinement. Interaction terms multiplied standardized metacognitive beliefs by standardized self-efficacy scores. Separate multiple regressions for perceived stress and resilience included metacognitive beliefs, self-efficacy, and their interaction, adjusting for age, gender, and counselling experience, with school-cluster-robust standard errors. Moderation was assessed via interaction coefficients, 95% CIs, and two-tailed tests at $\alpha = 0.05$; significance indicated the metacognitive beliefs–outcome association varied by self-efficacy level. The original multigroup analysis based on a median split of sources-of-counselling-self-efficacy scores was considered exploratory. Such categorization may reduce statistical power, obscure individual differences, and produce misleading estimates of relationships among variables (MacCallum et al., 2002). Accordingly, subgroup comparisons were not treated as sufficient evidence of moderation without formal testing of differences between group-specific structural coefficients.

Where multigroup structural equation modelling is used to compare latent structural relationships, measurement invariance should be evaluated before comparing the corresponding structural parameters (Putnick & Bornstein, 2016). Moderation within a multigroup framework requires appropriate between-group comparisons of constrained and unconstrained structural paths rather than comparisons in which individual paths are fixed to an arbitrary value within each group. Statistical significance was evaluated using a two-tailed alpha level of 0.05. Interaction coefficients, confidence intervals, and associated probability values were considered when interpreting the magnitude, direction, and statistical significance of moderation effects. Given the cross-sectional design, any observed moderation was interpreted as a conditional statistical association rather than evidence of a causal buffering or protective mechanism.

2.5 Ethical Considerations

Administrative authorization to conduct the study was obtained from the Educational Planning and Policy Research Division of the Malaysian Ministry of Education with the approval reference number KPM.600-3/2/3-eras(9641), approval date from 9th April 2021 to 3 October 2021. and the Sarawak State Education Department from 1st November 2021 to 1st April 2022 before conducting the study. Following the necessary administrative permissions, school counsellors were contacted by email and provided with information about the study, including its objectives and the informed consent procedure. Official correspondence was also sent to school principals and relevant school administrators to facilitate data collection.

3. RESULTS

3.1 Model Fit Analysis

Confirmatory Factor Analysis was performed using a pooled measurement model comprising three latent constructs: perceived stress, metacognitive beliefs, and resilience. The initial measurement model was evaluated using absolute, incremental, and parsimonious fit indices. The initial model yielded a Root Mean Square Error of Approximation (RMSEA) of 0.077, Comparative Fit Index (CFI) of 0.930, Tucker–Lewis Index (TLI) of 0.920, Normed Fit Index (NFI) of 0.888, Relative Fit Index (RFI) of 0.878, and normed chi-square (χ^2/df) of 2.473. Although several indices indicated acceptable fit, the NFI and RFI were below the conventional threshold of 0.90, suggesting that the initial measurement model required further refinement. Examination of the standardized factor loadings also identified item-PSS10 as having a loading below the recommended threshold of 0.60. Consequently, item-PSS10 was removed, and the Confirmatory Factor

Analysis was repeated to improve the measurement model. The revised measurement model demonstrated improved goodness-of-fit indices as illustrated in Figure 2. Specifically, the RMSEA decreased from 0.077 to 0.073, while the CFI increased from 0.930 to 0.939 and the TLI increased from 0.920 to 0.930. Similarly, the NFI improved from 0.888 to 0.900, and the RFI increased from 0.878 to 0.885. Furthermore, the normed chi-square (χ^2/df) decreased from 2.473 to 2.381, indicating an improvement in model fit relative to model complexity. The revised model satisfied the selected criteria for acceptable absolute, incremental, and parsimonious fit, although the RFI remained below 0.90.

3.2 Reliability

All three constructs demonstrated satisfactory reliability, with Composite Reliability values exceeding the commonly recommended threshold of 0.70. Specifically, perceived stress exhibited a Composite Reliability of 0.924, followed by 0.923 for metacognitive beliefs and 0.877 for resilience. It indicated adequate internal consistency among the observed indicators representing each latent construct, supporting the reliability of the measurement model.

3.3 Validity

Convergent validity was evaluated using standardized factor loadings and Average Variance Extracted. The standardized factor loadings for perceived stress ranged from 0.61 to 0.83, while those for metacognitive beliefs ranged from 0.75 to 0.91. Similarly, the factor loadings for resilience ranged from 0.67 to 0.83. All retained indicators exceeded the minimum loading criterion of 0.60. Furthermore, the Average Variance Extracted values were 0.575 for perceived stress, 0.706 for metacognitive beliefs, and 0.590 for resilience, all exceeding the recommended threshold of 0.50. These findings provide evidence of satisfactory convergent validity across the three constructs.

Table 1. Results of Construct Reliability and Convergent Validity

Constructs	**CR**	**AVE**	**√AVE**
Perceived stress	0.924	0.575	0.758
Metacognitive beliefs	0.923	0.706	0.84
Psychological resilience	0.877	0.59	0.768

Similarly, discriminant validity was examined using the Fornell–Larcker criterion. the square roots of each Average Variance Extracted values were 0.758 for perceived stress, 0.840 for metacognitive beliefs, and 0.768 for resilience. The inter-construct correlations were 0.555 between perceived stress and metacognitive beliefs, 0.756 between perceived stress and resilience, and 0.758 between metacognitive beliefs and resilience. The square root of Average Variance Extracted values for each construct exceeded its corresponding inter-construct correlations, indicating that the Fornell–Larcker criterion was satisfied. In this way, the construct validity was supported by the acceptable overall measurement model fit and the satisfactory standardized factor loadings observed following model refinement.

Table 2. Results of Fornell–Larcker Discriminant Validity

Constructs	**1**	**2**	**3**
Perceived stress	**0.759**		
Metacognitive beliefs	0.555	**0.840**	
Psychological resilience	0.756	0.758	**0.768**

3.4 Structural Model Analysis

As presented in Table 4, metacognitive beliefs demonstrated a statistically significant positive association with perceived stress ($\beta = 0.601$, SE = 0.070, CR = 8.617, $p < 0.001$). Similarly, a statistically significant positive association was observed between metacognitive beliefs and psychological resilience ($\beta = 0.673$, SE = 0.071,

CR = 9.474, p < 0.001). These findings indicate that higher scores on the metacognitive beliefs construct were associated with higher levels of both perceived stress and resilience. However, given the cross-sectional study design, these relationships should be interpreted as statistical associations rather than causal effects.

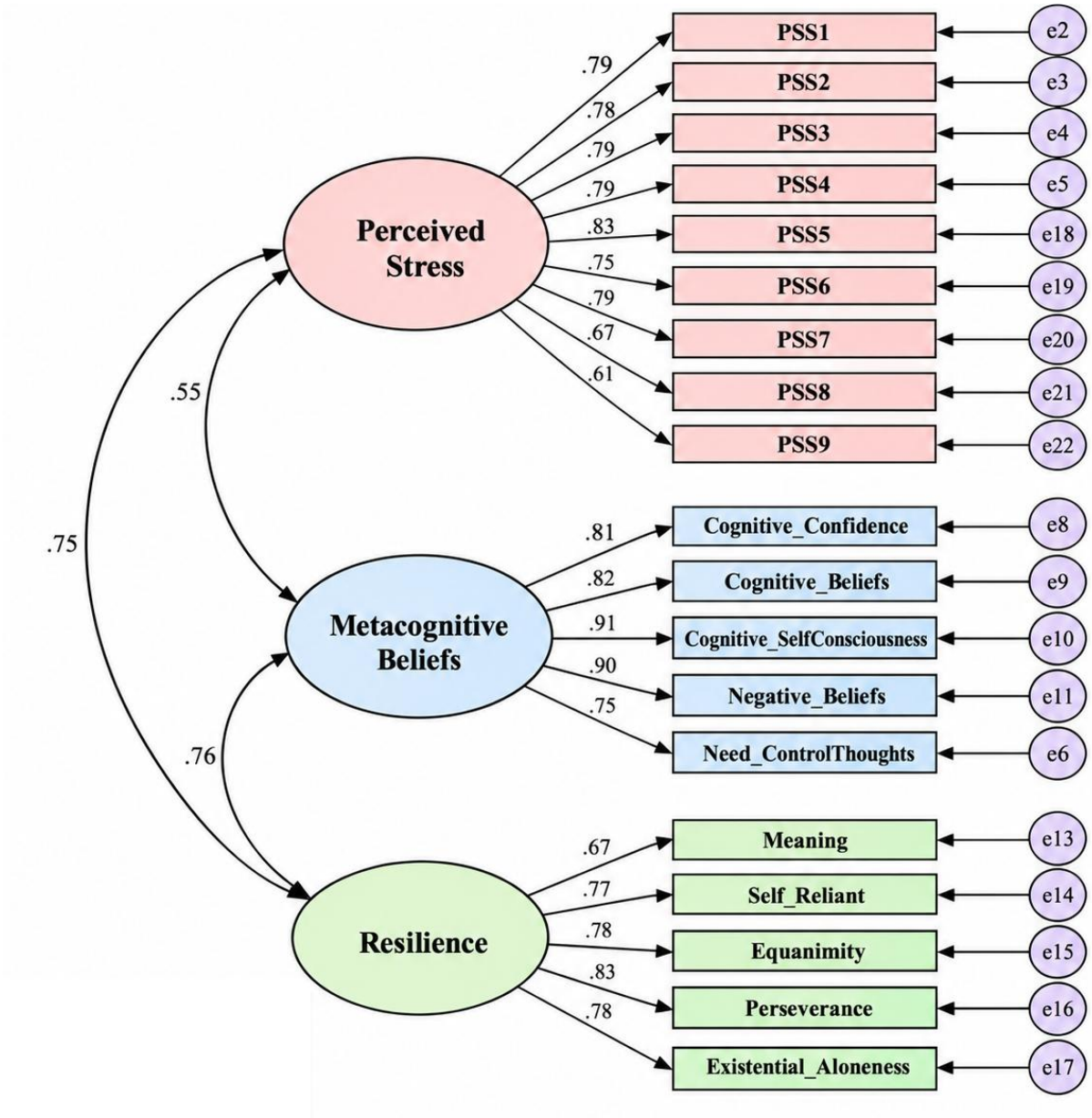


Figure 1 Final Pooled Confirmatory Factor Analysis Measurement Model

Table 3. Structural Path Coefficients for Hypothesized Direct Relationships

Structural Paths	Estimate (β)	SE	CR	p-value
Metacognitive beliefs → Perceived stress	0.601	0.070	8.617	<0.001
Metacognitive beliefs → Psychological resilience	0.673	0.071	9.474	<0.001

Note. β = reported regression coefficient; SE = standard error; CR = critical ratio.

3.5 Moderating Role of Sources of Counselling Self-Efficacy

Separate multivariable linear regression models were specified for perceived stress and psychological resilience.

3.5.1 Moderation of the Association Between Metacognitive Beliefs and Perceived Stress

As presented in Table 4, the interaction between metacognitive beliefs and sources of counselling self-efficacy was negatively associated with perceived stress (b = −0.310, 95% CI [−0.400, −0.220], p < .001). The negative

interaction coefficient indicates that the positive association between metacognitive beliefs and perceived stress became weaker as reported sources of counselling self-efficacy increased. Accordingly, sources of counselling self-efficacy demonstrated a statistically significant moderating association in the relationship between metacognitive beliefs and perceived stress, after adjustment for the specified covariates.

3.5.2 Moderation of the Association Between Metacognitive Beliefs and Psychological Resilience

A statistically significant positive interaction was also reported between metacognitive beliefs and sources of counselling self-efficacy in predicting psychological resilience (b = 0.402, 95% CI [0.305, 0.498], p < .001). This finding indicates that the association between metacognitive beliefs and psychological resilience became more positive at higher levels of reported sources of counselling self-efficacy. Thus, the direction and magnitude of the metacognitive beliefs–resilience association varied according to the continuous moderator, controlling for age, gender, and professional counselling experience.

Table 4. Continuous Interaction Regression Analysis of the Moderating Role of Sources of Counselling Self-Efficacy

Interaction Pathways	**β**	**Cluster-robustness Std. Error**	**95% CI**	**p-value**
Metacognitive beliefs × Sources of counselling self-efficacy → Perceived stress	−0.310	0.046	[−0.400, −0.220]	< 0.001
Metacognitive beliefs × Sources of counselling self-efficacy → Psychological resilience	0.402	0.049	[0.305, 0.498]	<0 .001

4. DISCUSSION

The present study examined the associations of metacognitive beliefs with perceived stress and psychological resilience among secondary school counsellors in Sarawak, Malaysia, and investigated the moderating role of sources of counselling self-efficacy. Drawing on the Self-Regulatory Executive Function (S-REF) model and Social Cognitive Theory, the findings provide insights into the relationships between cognitive vulnerability, psychological adaptation, and efficacy-related resources within a school counselling population. The structural model indicated statistically significant positive associations between metacognitive beliefs and both perceived stress and psychological resilience. Furthermore, the continuous interaction analyses indicated that these associations differed according to reported sources of counselling self-efficacy. These findings are discussed in relation to the existing literature, their theoretical implications, and their relevance to counsellor well-being.

4.1 Metacognitive Beliefs and Perceived Stress

The findings revealed a statistically significant positive association between metacognitive beliefs and perceived stress (β = 0.601, p < .001). This result is consistent with the S-REF model, which proposes that dysfunctional metacognitive beliefs contribute to the persistence of psychological distress through the Cognitive Attentional Syndrome, characterized by repetitive negative thinking, heightened threat monitoring, and maladaptive coping strategies (Wells & Matthews, 1996; Wells, 2000). Individuals who endorse beliefs concerning the uncontrollability, importance, or potential danger of their thoughts may experience greater difficulty disengaging from stress-related cognitive processes, thereby reporting higher perceived stress.

This interpretation is broadly consistent with previous evidence linking metacognitive beliefs with stress responses and negative psychological experiences (Spada et al., 2008; Capobianco et al., 2017; Hagen et al., 2020). More recent investigations have similarly emphasized the relationships among metacognitive beliefs, repetitive thinking, emotional dysregulation, and psychological distress (Cano-López et al., 2024; Mansueto et al., 2024). Within school counselling settings, such associations may be particularly relevant because counsellors frequently encounter emotionally demanding student concerns alongside institutional responsibilities and professional expectations.

Nevertheless, metacognitive beliefs should be distinguished from metacognitive skills. Whereas metacognitive skills involve the monitoring and regulation of cognitive processes, the Metacognitions Questionnaire-30 asse-

sses beliefs concerning thinking and its consequences (Wells & Cartwright-Hatton, 2004). Accordingly, the observed positive association should not be interpreted as evidence that greater metacognitive competence increases stress. Rather, it suggests that stronger endorsement of the measured metacognitive beliefs is associated with greater perceived stress. The cross-sectional design does not establish whether these beliefs precede stress or whether stressful experiences contribute to their endorsement.

4.2 Metacognitive Beliefs and Psychological Resilience

The structural model also demonstrated a statistically significant positive association between metacognitive beliefs and psychological resilience ($\beta = 0.673$, $p < .001$). This finding deserves particular consideration because the S-REF framework primarily emphasizes the role of dysfunctional metacognitive beliefs in maintaining psychological distress. The simultaneous positive associations with perceived stress and resilience therefore suggest that the relationships between metacognitive beliefs and psychological functioning may be more complex than a straightforward vulnerability model would predict.

One possible explanation is that the dimensions of metacognitive beliefs may not be uniformly associated with adaptive functioning. The MCQ-30 encompasses positive beliefs about worry, negative beliefs about uncontrollability and danger, cognitive confidence, need to control thoughts, and cognitive self-consciousness (Wells & Cartwright-Hatton, 2004). These dimensions reflect different aspects of individuals' beliefs concerning cognition, and their associations with psychological resilience may differ. Although previous research has explored connections among metacognition, cognitive adaptation, and resilience (Hagen et al., 2020; Parsons et al., 2016), the present findings do not establish which specific metacognitive dimensions account for the positive association observed.

An additional consideration is the relationship between perceived stress and psychological resilience. The relatively high positive correlation reported between these constructs suggests that their measurement and conceptual distinctiveness warrant careful examination. Although resilience and stress are not necessarily mutually exclusive, the direction and magnitude of their association should be interpreted cautiously. Further investigation of scale scoring, construct validity, and dimension-specific relationships may clarify these findings.

Thus, the positive metacognitive beliefs–resilience association should not be taken as evidence that dysfunctional metacognitive beliefs promote resilience. Rather, it identifies an empirical relationship requiring further investigation, particularly through longitudinal and multidimensional research capable of distinguishing potentially adaptive and maladaptive metacognitive characteristics.

4.3 Moderating Role of Sources of Counselling Self-Efficacy

A central objective of this study was to investigate whether sources of counselling self-efficacy moderated the associations between metacognitive beliefs and the two psychological outcomes. The reported continuous-variable interaction analyses suggested statistically significant moderation in both relationships, providing preliminary support for the relevance of efficacy-related resources in understanding counsellors' psychological functioning.

For perceived stress, the interaction between metacognitive beliefs and sources of counselling self-efficacy was negative ($b = -0.310$, 95% CI $[-0.400, -0.220]$, $p < .001$). This pattern indicates that the positive association between metacognitive beliefs and perceived stress became weaker at higher levels of reported sources of counselling self-efficacy. The finding is compatible with the broader proposition that efficacy-related resources may be relevant to individuals' appraisal of demanding circumstances and their responses to psychological challenges.

Social Cognitive Theory provides a useful framework for considering this association. Bandura (1997) proposed that self-efficacy beliefs are relevant to individuals' evaluations of their capabilities, motivation, and responses to challenging situations. Previous studies have also documented relationships between self-efficacy, occupational stress, burnout, and psychological adjustment (Benight & Bandura, 2004; Makara-Studzińska et al., 2019). Nevertheless, the present study measured sources of counselling self-efficacy rather than self-efficacy beliefs directly. Consequently, the observed interaction should be interpreted in relation to the measured efficacy-related experiences and resources, without assuming that the study directly assessed perceived professional competence.

For psychological resilience, a positive interaction was reported between metacognitive beliefs and sources of counselling self-efficacy ($b = 0.402$, 95% CI [0.305, 0.498], $p < .001$). This result indicates that the metacognitive beliefs–resilience association became more positive as sources-of-counselling-self-efficacy scores increased. The pattern is consistent with the possibility that efficacy-related experiences and resources are relevant to the relationship between cognitive beliefs and psychological adaptation. Previous research has emphasized the importance of self-efficacy in psychological adjustment and resilience-related processes (Benight & Bandura, 2004; Djourova et al., 2020).

The Sources of Counselling Self-Efficacy Scale–Malaysia encompasses mastery experience, vicarious learning, social persuasion, and physiological and affective states (Ooi et al., 2020). These dimensions provide a theoretically relevant basis for investigating how counsellors' professional experiences and efficacy-related resources may relate to psychological functioning. However, the present interaction analyses do not establish the separate contributions of these four dimensions. Nor do they demonstrate that increasing such resources would directly reduce stress or improve resilience.

Taken together, the reported interaction patterns suggest that the relationships between metacognitive beliefs and psychological outcomes are conditional on sources of counselling self-efficacy. This interpretation extends the study beyond the examination of direct associations and supports further investigation of how cognitive beliefs and efficacy-related resources are jointly associated with counsellors' psychological functioning.

4.4 Theoretical and Practical Implications

The findings offer a basis for considering the S-REF model and Social Cognitive Theory together in research on school counsellor well-being. The S-REF model provides an account of how metacognitive beliefs may be associated with maladaptive cognitive processes and perceived stress, whereas Social Cognitive Theory emphasizes the relevance of efficacy-related beliefs and experiences to psychological functioning (Wells & Matthews, 1996; Bandura, 1997). The present findings suggest that integrating these perspectives may be useful for understanding individual differences in counsellors' responses to demanding professional circumstances.

From a practical perspective, the findings may inform future research on counsellor supervision, professional development, and psychological support. In particular, programmes addressing maladaptive metacognitive beliefs could be investigated alongside approaches that strengthen mastery experiences, constructive professional feedback, observational learning, and the management of emotional responses. However, because the present research was observational, the effectiveness of such approaches cannot be inferred from these findings and requires evaluation through appropriately designed intervention studies.

4.5 Interpretation and Directions for Further Investigation

Several considerations are important when interpreting the findings. The cross-sectional design prevents conclusions regarding temporal ordering or causality, while reliance on self-report instruments introduces the possibility of shared-method influences. The study was also restricted to secondary school counsellors in Sarawak, and the possibility of nonresponse bias cannot be excluded despite the relatively high participation rate.

Furthermore, modification of the perceived stress measurement model, the strong positive correlations among some constructs, and the use of composite scores in the moderation analyses warrant methodological consideration. Future research should examine the individual dimensions of metacognitive beliefs and sources of counselling self-efficacy, evaluate measurement properties across different counsellor populations, and employ longitudinal designs to investigate whether the observed associations remain stable over time. Such investigations would help clarify the potential mechanisms linking cognitive beliefs, efficacy-related resources, perceived stress, and psychological resilience.

5. LIMITATIONS OF STUDY

This study has a limitation in the sample and sampling aspects because the study only used one sample group, school counsellors who served in Sarawak in 2022. Thus, the findings of this study appear to be multi-implied and should not be generalized to the overall school counsellors in Malaysia as there may be a difference in their beliefs, experiences, and perspectives on the variables studied. Individual beliefs, experiences, and perspectives on the studied topic may vary between individuals and others. Furthermore, this study only focused on constructing metacognitive, stress, resilience, and self-efficacy.

Although the study achieved a participation rate of 81.6%, potential nonresponse bias should be considered when interpreting the findings. Counsellors who did not participate may have differed from respondents in their perceived stress, resilience, metacognitive beliefs, or sources of counselling self-efficacy. Consequently, the analytical sample may not fully represent all eligible counsellors in the identified population. Furthermore, because the study was restricted to public secondary school counsellors in Sarawak, caution is required when generalizing the findings to counsellors working in other Malaysian states or educational settings.

6. FUTURE RESEARCH RECOMMENDATIONS

Based on this study, it is recommended that future researchers use qualitative design methods or mixed methods. This qualitative method of interviewing is proposed to confirm the findings of this study to enable a more precise explanation of metacognitive beliefs with the aspects studied. This method's strong design explores the elements or topics studied more deeply and thoroughly and, in turn, can produce more detailed findings than quantitative methods. It is also seen to unravel and understand the processes that occur in more realistic situations to obtain clearer and more detailed results. The findings that will be obtained later may result in more comprehensive data. This study contributes new insight to the policymakers, especially those in the educational institution, about the importance of metacognitive, not only in the ability to handle stress but also in influencing one's self-efficacy. Counsellors must have metacognitive skills due to the nature of their business, which requires them to overcome negative notions such as overthinking, stress, etc. An intervention to improve metacognitive skills among counsellors is strongly recommended.

7. CONCLUSION

This study examined the associations between metacognitive beliefs, perceived stress, and psychological resilience among secondary school counsellors in Sarawak, Malaysia, with particular attention to the moderating role of sources of counselling self-efficacy. The findings indicated significant positive associations between metacognitive beliefs and both psychological outcomes. Furthermore, the reported continuous interaction analyses suggested that the strength and direction of these associations varied according to sources of counselling self-efficacy. Specifically, higher efficacy-source scores were associated with a weaker positive relationship between metacognitive beliefs and perceived stress and a more positive relationship between metacognitive beliefs and psychological resilience.

The study contributes to the literature by examining cognitive vulnerability and psychological adaptation as distinct aspects of counsellors' functioning and by considering efficacy-related resources within an integrated theoretical framework. The findings highlight the potential value of examining metacognitive beliefs alongside professional experiences and resources when investigating counsellor well-being. Nevertheless, the unexpected positive relationship between metacognitive beliefs and resilience requires further investigation, particularly at the level of individual metacognitive dimensions.

Given the cross-sectional design, the findings should be interpreted as statistical associations rather than evidence of causal or protective mechanisms. Future longitudinal and intervention studies are needed to clarify the relationships among metacognitive beliefs, sources of counselling self-efficacy, perceived stress, and psychological resilience. Such research may provide a stronger empirical foundation for developing psychological support and professional development initiatives aimed at promoting school counsellors' well-being.

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