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# FACTORS AFFECTING POST-TRAUMATIC GROWTH OF BEREAVED STUDENTS TO UNRESTS IN SOUTHERN THAILAND

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# Abstract

This cross-sectional research was aimed at developing and validating a structural equation model of posttraumatic growth (PTG) of bereaved students from the civil unrest in southernmost provinces of Thailand with empirical data, as well as examining the effects of mindfulness, wisdom, and perceived social support with PTG. Participants were 281 bereaved university students studying in the academic year 2020, losing loved ones from unrest situations, and answering an online questionnaire about mindfulness, perceived social support, wisdom, and PTG. Data were analyzed by descriptive statistics, confirmatory factor analysis, and structural equation modeling. The results of validating the structural equation model of PTG suggested the model fitted with the empirical data (Chi-Square = 66.07, p = 0.25, df = 59, GFI = 0.96, AGFI, CFI = 0.99, TLI = 0.99, and RMSE = 0.02). The variables in the model accounted for 27% of the total variance of PTG. Mindfulness and perceived social support had significant direct effects on the PTG of the bereaved students at .01 levels, with .32 and .31 effect sizes, respectively. Application of this model to develop PTG for bereaved students should entail mindfulness training and enhancement of perceived social support; however, wisdom should be studied further.

Keywords: Bereaved Students, Mindfulness, Perceived Social Support, Posttraumatic Growth, Wisdom

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# Introduction

The civil unrest in southern Thailand beginning in 2004 and far in 2020 reported 20,847 violent incidents, with 7,021 deaths and 13,466 injuries; this incident resulted in 6,687 children and adolescents being orphaned, with 94% being fatherless, 4.55% being motherless, and 1.45% of having neither parent (Buranajaroenkij, 2021). Wichaidit (2018) reported there was trauma associated with direct trauma, traumatic grief/loss of loved ones, and historical trauma. Following the sudden, traumatic death of loved ones, survivors may face what is known as "traumatic bereavement", characterized by enduring symptoms of both trauma and grief (Wortman & Pearlman, 2016). To date, there have been very few surveys on trauma and grief among children and adolescents who have experienced the loss of their loved ones in this unrest. Understanding loss and grief, as well as the factors and dynamics of posttraumatic growth, can be helpful in finding ways to help students suffering from grief and loss so that they can live and study more efficiently. This study, therefore, began by exploring the effects of psychological changes after the loss of loved ones in the term of "posttraumatic growth (PTG)" among university students who have experienced the loss of their loved ones in the current civil unrest in southern Thailand.

## **Literature Review**

According to the concept of Tedeschi & Calhoun (1996; 2004), who defined PTG as the experience of positive change occurring from the struggle with highly challenging life crises, showed results in 5 areas: personal strength, new possibilities, relating to others, appreciation of life, and spiritual change. The concept of PTG was used to examine and monitor positive mental changes after university students encountered various disasters (Hooper et al., 2009; Shigemoto & Poyrazli, 2013; Silva et al., 2018; Taku et al., 2008a). Additionally, evidence showed the appropriateness of the five PTG factors among university students (Hooper et al., 2009; Silva et al., 2018). There are many factors affecting PTG, and the results of the literature review found mindfulness, perceived social support, and wisdom can be important factors in facilitating PTG development in university students who have lost loved ones in civil unrest situations. These factors have both direct and indirect effects on PTG as follows. Mindfulness is defined as the tendency to be highly aware of one's internal and external experiences in the context of an accepting, nonjudgmental stance toward those experiences (Cardaciotto et al., 2008). There are two components of mindfulness. 1) Awareness is characterized as continuously monitoring experiences with a focus on current experiences rather than preoccupation with past or future events, including attention control. 2) Acceptance is a way in which present-moment awareness is conducted nonjudgmentally with an attitude of acceptance, openness, and compassion toward one's experiences. Research reports showed mindfulness is strongly related to PTG (Hanley et al., 2015; Jaaniste et al., 2017; Williams et al., 2021).

Perceived social support is defined as the perception of social support adequacy from three specific sources: family, friends, and other significant individuals. It involves some kinds of relationship transactions between individuals. This plays a role in coping resources or acts as a buffer between stressful life events and psychological and physical symptoms (Zimet et al., 1988). The results of the relation between sources of social support (parents, friends, and teachers) were positively correlated with PTG (Howard Sharp et al., 2018; Prati & Pietrantoni, 2009).

Wisdom is a multifaceted and multidimensional concept, and multiple facets and dimensions reinforce each other. Ardelt (2003) mentioned the definition by Clayton, and Birren as a basic definition of wisdom appears to be compatible with the most modern and ancient descriptions of wisdom; it is defined as an integration of cognitive, reflective, and affective dimensions. LaRue (2016) mentioned by the wise elder technique (metaphoric experiential technique),

adult and adolescent clients were invited to seek advice from an older part of themselves to access their internal wisdom to acknowledge their respect for elders while the best path was found in grieving a loss. They were also asked to answer their dilemmas in life as a cognitive behavioral therapy thought-change tool. There were reports supporting that wisdom was positively associated with PTG (Webster & Deng, 2015; Yang & Ha, 2019). In addition, mindfulness is positively related to wisdom (Stang, 2016; Tedeschi & Calhoun, 2004; Verhaeghen, 2020). Ardelt (2003) mentioned mindfulness, before developing PTG, must go through processes including the process of cognition, reflection, and affection. A primary study showed mindfulness was significantly related to wisdom, while both mindfulness and wisdom significantly predicted PTG (Prohmpetch et al., 2022). Perceived social support is also positively related to wisdom. Meanwhile, perceived social support still influences PTG through wisdom (Tedeschi & Calhoun, 2004; Prohmpetch et al., 2022). Some empirical evidence showed that social support, as a supportive social context and potential environmental resources, can contribute to successful coping with difficulties and the process of cognitive adjustment after a traumatic event (Aliche et al., 2019). Therefore, the relational model of mindfulness, perceived social support, and wisdom are expected to be related to affecting PTG changes. From a review of the literature, two latent variables were selected: mindfulness (Cardaciotto et al., 2008) and perceived social support (Zimet et al., 1988), treated as exogenous variables. In addition, two other latent variables, wisdom (Ardelt, 2003) and PTG (Taku et al., 2008a; Tedeschi & Calhoun, 1996), were treated as endogenous variables. The purpose of this study was then to test the structural equation model (SEM) of factors contributing to PTG of bereaved students losing loved ones to civil unrest in southern Thailand. The result of this study would be more useful in treating, monitoring, controlling, managing, and promoting bereaved students after the loss of loved ones to PTG.

Additionally, in terms of hypotheses,  $H_1$  referred to mindfulness which was expected to positively affect PTG.  $H_2$  meant perceived social supports, which were expected to positively impact PTG.  $H_3$  was set for wisdoms which were expected to positively affect PTG.  $H_4$  was a hypothesis of mindfulness which was expected to positively contribute to wisdom.  $H_5$  was realized as perceived social supports that were expected to positively result in wisdom. Moreover, regarding the indirect influence model or the mediating role of wisdom,  $H_6$  referred to wisdom which mediated the relationship between mindfulness and PTG, and  $H_7$  referred to wisdom mediating the relationship between perceived social supports and PTG, as shown in Figure 1.



Figure 1 Proposed Conceptual Framework

H6: Mindfulness  $\rightarrow$  Wisdoms  $\rightarrow$  Posttraumatic Growth

H7: Perceived Social Supports  $\rightarrow$  Wisdoms  $\rightarrow$  Posttraumatic Growth

# **Research Methodology**

This cross-sectional research was conducted with students losing their loved ones from the civil unrest in the three southern border provinces of Thailand, and they were studying in undergraduate programs at public universities in the academic year 2021, covering 3 provinces: Pattani, Yala, and Narathiwat. The sample size was calculated by the G\*power program (Faul, 2017). The effect size was set at 0.4, the significant level at 0.05, the power at 0.80, and the degree of freedom at 91 (df = ni(ni+1)/2 where ni was the number of observed variables, which was 13 in the current study). These resulted in a minimum sample size of 244.

Participants were recruited with a purposive sampling method. Flyers and links to google form questionnaires were distributed to potential participants' universities. There, inclusion criteria were outlined as 1) being an undergraduate in the Academic Year of 2020, 2) experiencing the loss of their significant others (e.g., a parent, sibling, close relative, boyfriend, girlfriend, or partner) due to unrest in the southern border provinces, 3) reportedly having no psychiatric diagnoses and relevant therapeutic treatments, 4) proficient in reading and understanding Thai language., and 5) voluntarily participating in the current study. In addition, the data collection was permitted by these three universities covering three southern border provinces. Also, the data collection was commenced after Institutional Ethical Review Board approval was obtained (The Research Ethics Committee for Humanities, Social Science and Education, Prince of Songkla University, Pattani Campus, REC Number: psu.pn.2-016/64, date of approval: 29 Mach 2021).

Two hundred and eighty-one respondents (n = 281) voluntarily participated in the study. Most of the samples were female (76.9%), 31.0% studied in year 1, 28.1% studied at the Faculty of Humanities and Social Sciences/Arts, and 36.7% earned between 3.00 and 3.49 grade point average. In addition, 86.1% of the participants were Muslim, 48.0% had lost their close people once, and 28.5% had lost their loved ones for 3 years. 50.2% met the criteria for complicated grief, 36.3% were still facing the current problem and the psychological impacts of losing loved ones, and 32.7% also experienced violence in the southern border provinces.

## **Measures**

1) The questionnaire comprised informed consent, demographic questions (genders, years of study, faculties, grade point average, domiciled provinces, and religions), and information about the loss of their loved ones due to the civil unrest (a number of loss times, an amount of time since loss, complicated grief, and problems facing in the present moment).

2) Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996; Taku et al., 2008b) assessed growth after experiencing loss of loved ones. It was divided into 5 components: Personal Strength (4 items,  $\alpha = .86$ ), New Possibilities (5 items,  $\alpha = .89$ ), Relating to Others (7 items,  $\alpha = .89$ ), Appreciation of Life (3 items,  $\alpha = .72$ ), and Spiritual Change (2 items,  $\alpha =$ .66). The participants responded to 21 items (e.g., "I established a new path for my life") on a six-point Likert scale from 0 (not at all) to 5 (a very great degree). All of the items were summed, and the reliability was excellent,  $\alpha = .96$ .

3) Inventory of Complicated Grief (ICG) (Prigerson et al., 1995) assessed complicated grief after loss of loved ones. The participants responded to 19 items (e.g., "I feel bitter over this person's death...") on a five-point Likert scale from 0 (not at all) to 4 (a very great degree). All of the items were summed, and the reliability was excellent,  $\alpha = .95$ .

4) The Philadelphia Mindfulness Scale (PHLMS) (Cardaciotto et al., 2008) in the Thai version (Silpakit et al., 2011) assessed mindfulness by evaluating participants' experiences occurring in the past 7 days. It was divided into 2 components: Awareness (10 items,  $\alpha = .91$ ) and Acceptance (10 items,  $\alpha = .88$ ). The participants responded to 20 items (e.g., "There are aspects of myself I don't want to think about") on a five-point Likert scale from 1 (never) to 5 (very often). All of the items were summed, and the reliability was excellent,  $\alpha = .93$ .

5) Three-dimensional Wisdom scale (3D-WS) (Ardelt, 2003) assessed wisdom, a latent variable of each participant's characteristics, which can be integrated into three dimensions: Cognitive (14 items,  $\alpha = .84$ ), Reflective (12 items,  $\alpha = .85$ ), and Affective dimensions (13 items,  $\alpha = .79$ ). The participants responded to 15 items (e.g., "Life is basically the same most of the time") on a five-point Likert scale from 1 (strongly agree) to 5 (strongly disagree). They also responded to 24 items (e.g., "I often do not understand people's behavior") on a five-point Likert scale from 1 (definitely true of myself) to 5 (not true of myself). All of the items were summed up, and the reliability was excellent,  $\alpha = .92$ .

6) Three dimensions of the multidimensional scale of perceived social support (MSPSS) (Zimet et al., 1988) were assessed: families (4 items,  $\alpha = .91$ ), friends (4 items,  $\alpha = .92$ ), and other significant people (4 items,  $\alpha = .93$ ). The participants responded to 12 items (e.g., "My family really tries to help me") on a seven-point Likert scale from 1 (very strongly disagree) to 7 (very strongly agree). All of the items were summed, and the reliability was excellent,  $\alpha = .95$ .

All drafted Thai versions were reviewed by five experts, including two in psychology, two in languages, and one in culture. The result was acceptable with the index of item-objective congruence value at 0.60 or above, including the research team's discussion of each item. These Thai-edition tools were tested on similar samples (n = 59), and the reliability of every translated tool was determined and resulted in a good and higher level of reliability.

#### **Statistical Analysis**

A matching response pattern was used to handle the five cases with few missing data. The assumption of the data multivariate normality was also confirmed through the examinations of the variance inflation factors, tolerance values, skewness, and kurtosis statistics, which fell within the expected range. Because the scale of all item responses showed the ordinal data, the correlation matrix of observer variables was calculated with PRELIS (Joreskog & Sorbom, 2005). A two-step model-building approach (Anderson & Gerbing, 1988) was applied to develop and test the structural equation model of factors contributing to PTG. In the first step, the confirmatory factor analysis was calculated to test the measurement model of the latent variables: mindfulness, wisdom, perceived social support, and PTG. In the second step, the structural model was built and tested via the LISREL 8.72 (Joreskog & Sorbom, 2005) software package with the maximum likelihood estimation. Decisions regarding the adequacy of the model fit were based on the following criteria: a chi-square pvalue at greater than .05 or chi-square/df value at not exceeding 2 to indicate a good fit, root mean square of approximation (RMSEA), root mean square residual (RMR), the standardized root mean square residual (SRMR) value at lower than 0.05, Tucker-Lewis index(TLI), the goodness of fit index (GFI) and adjusted GFI (AGFI), comparative fit index (CFI) values at greater than 0.90 or 0.95, and the largest standardized residual value at exceed 2 (Hair et al., 2014; Schumacker & Lomax, 2016).

## **Research Results**

In Table 1, the average of each observed variable was between 3.18 and 31.60, with the standard deviation between 0.40 and 8.74. Variance inflation factor (VIF) ranged from 1.45 to 2.65, not exceeding 10; and the tolerance value ranged from 0.37 to 0.69, not exceeding 0.10 (Hair et al., 2014), indicating that multicollinearity was not significant. As the skewness index ranged from -1.14 to 0.50 but did not exceed 3, and the kurtosis index ranged from -0.47 to 0.86 but did not exceed 10 (Rex, 2011), therefore, the skewness and the kurtosis were likely to be in a normal distribution.

According to the analysis of the correlation, 13 observed variables had significant correlations. A correlation coefficient value ranged from 0.12 to 0.89. The highest value was

the relationship between personal strength and new possibilities, while the lowest value was the relationship between reflective and new possibilities.

Regarding the confirmatory factor analysis to test these four latent variables constructed prior to the model fitting, the first latent variable, mindfulness, was constructed with awareness and acceptance as indicators. The second latent variable, perceived social support, was constructed with families, friends, and other significant people as indicators. The third latent variable, wisdom, was constructed with cognitive, reflective, and affective indicators. Finally, posttraumatic growth was constructed with personal strength, new possibilities, relating to others, appreciation of life, and spiritual change as indicators. All four latent variables were viable and strongly associated with their predicted indices.

The results of the structural model investigating the effects of mindfulness, perceived social support, and wisdom on the PTG revealed that the model had a relationship with the empirical data, based on the value of  $\Box 2 = 66.07$ , df = 59,  $\Box 2/df = 1.12$ , p-value = 0.25, RMSEA = 0.02, SRMR = 0.03, GFI = 0.96, AGFI = 0.95, CFI = 0.99, and TLI = 0.99. In other words, the latent variables of mindfulness, perceived social support, and wisdom could describe the variance of the latent variables of the PTG by 27%.

In Table 2, both mindfulness ( $\beta = .32, p < .01$ ) and perceived social support ( $\beta = .31, p < .01$ ) had a significant direct positive effect on PTG. Meanwhile, the perceived social support factor also had a significant positive effect on wisdom ( $\beta = .32, p < .01$ ).

Variables	Mindfulness		Social support		Wisdom			Posttraumatic growth					
	AWA	ACC	FAM	FRI	SIG	COG	REF	AFF	PS	NP	RO	AL	SC
AWA	-												
ACC	.67**	-											
FAM	.23**	.07	-										
FRI	.23**	.11	.69**	-									
SIG	.29**	.15**	.68**	.73**	-								
COG	.16**	.06	.15**	.10	.16**	-							
REF	.12**	.01	.22**	.25**	.27**	.43**	-						
AFF	.16**	.08	.25**	.24**	.32**	.53**	.60**	-					
PS	.38**	.30**	.30**	.29**	.35**	.07	.16**	.18**	-				
NP	.37**	.29**	.34**	.33**	.36**	.11	.12*	.18**	.89**	-			
RO	.37**	.30**	.31**	.32**	.32**	.05	.11	.15**	.85**	.86**	-		
AL	.34**	.28**	.30**	.27**	.31**	.15*	.16**	.22**	.77**	.79**	.72**	-	
SC	.36**	.28**	.30**	.27**	.30**	.03	.16**	.20**	.80**	.77**	.77**	.68**	-
M	31.60	29.96	22.12	21.47	22.20	3.25	3.18	3.27	13.56	16.48	22.94	9.17	7.10
SD	8.74	7.72	5.44	5.11	5.46	.68	.40	.46	4.32	5.43	7.10	3.49	2.43
Skewness	11	01	81	71	81	37	.50	.09	93	89	90	59	-1.14
Kurtosis	47	33	03	.21	05	.20	.17	.40	.53	.56	.82	26	.86
α	.91	.88	.91	.92	.93	.84	.85	.79	.86	.89	.89	.72	.66

**Table 1** Basic statistics and correlation matrix of the observer variables

Note: \* p < .05; \*\* p < .01; AWA = Awareness; ACC = Acceptance; FAM = Family; FRI = Friends; SIG = Significant others; COG = Cognitive; REF = Reflective; AFF = Affective; PS = Personal Strength; NP = New Possibilities; RO = Relating to Others; AL = Appreciation of Life; SC = Spiritual Change; Social support = Perceived social support

[7]

Hypothesis	Estimate	<i>t</i> -value	S.E.
Direct effect			
$H_1$ : mindfulness $\rightarrow$ PTG	0.32	4.92**	0.06
H <sub>2</sub> : perceived social supports $\rightarrow$ PTG	0.31	4.56**	0.07
H <sub>3</sub> : wisdom $\rightarrow$ PTG	0.04	0.57	0.07
H <sub>4</sub> : mindfulness $\rightarrow$ wisdom	0.09	1.36	0.07
H <sub>5</sub> : perceived social supports $\rightarrow$ wisdom	0.35	5.09**	0.08
Indirect effect			
H <sub>6</sub> : mindfulness $\rightarrow$ wisdom $\rightarrow$ PTG	0.00	0.53	0.01
H <sub>7</sub> : perceived social supports $\rightarrow$ wisdom $\rightarrow$ PTG	0.01	0.57	0.02

**Table 2** Testing results of the hypotheses

Note: \*\* *p* < .01

## **Conclusion and Discussion**

In the current study, the structural equation model of the interrelationship factors between mindfulness, wisdom, and perceived social support, which contributed to PTG of students losing their loved ones from the civil unrest in the South of Thailand, was examined. The results of the study revealed that the model of the factor relationships contributing to PTG fitted with the empirical data. However, only the factors of mindfulness and perceived social support had direct positive effects on PTG.

The finding showed mindfulness had a significant direct positive effect on PTG. According to Lianchao & Tingting (2020), mindfulness had a direct and positive effect on PTG. The majority of participants may have had contributing factors tending to be more aware of their internal and external experiences during the bereavement experience with accepting and nonjudgmental attitudes (Cardaciotto et al., 2008). Similar to Vanaleesin et al. (2015), it was found that the experience of losing a loved one among Thai Muslim students who had followed religious principles made the students mindful, be aware of your situation and be open to accepting it, Labelle et al. (2015) found that those who practiced mindfulness significantly increased PTG changes, and Hanley et al. (2015) have discussed that trait mindfulness may be an important protective factor because it awakened traumatic life experiences and facilitated finding meaning in the midst of adversity.

Perceived social support had a significant direct positive effect on PTG. The participants were likely to perceive they would receive adequate support from families, friends, or other significant people. As a result, they were likely to act as buffers between the events of losing their loved ones and grief. Their Personal Strength, New Possibilities and positive feelings increased, contributing to PTG development. This result may be similar to study results by Howard Sharp et al. (2018) stating social support from parents and peers had a significant negative effect on grief, while social support from parents, teachers, and friends had a significant positive effect on PTG of bereaved siblings. Prati & Pietrantoni (2009) found both social support and seeking social support coping were moderately related to PTG. The influence of perceived social support might have resulted from positive communications that the participants had with their parents, close relatives, close friends, or significant others. These could have affected their cognitive process, stimulated the new information processing, brought about new coping strategies. Altogether, these could have contributed to PTG. As Michael & Cooper (2013) revealed adaptive coping efforts, including seeking support from surviving parents or care givers, may promote constructive information processing that would have altered schemas and led to growth. In addition to the effect of perceived social support on information processing of new information, the response of safe and trusted others (e.g., parent, close relatives, close friends) could have contributed to a flexible and more balanced

mood and perspectives on the crisis, leading to self-disclose and readiness to face new problems and learn from these new experiences. As Tedeschi & Calhoun (2004) mentioned the degree to which individuals engaged in self-disclosure about their emotions and their perspective on their crisis, and how others responded to that self-disclosure, may also play a role in growth. Cadell et al. (2003) concluded that the more support a person had, the more growth was experienced in the aftermath of trauma.

Applications of the PTG development model in bereaved students should consider promoting mindfulness activities that involve awareness and acceptance without judgment but with an openness and compassionate acceptance of one's own experiences, and promoting perceived social support from family, friends, and significant persons. Appropriate interventions should be organized into groups because the group process can facilitate members' participation, self-disclosure, sharing, and exploring experiences with accepting and nonjudgmental attitudes and building encouragement together. The benefit of individual support is that it is easy to find ways to practice mindfulness, but perceived social supports may need to be explored through positive, emotionally affecting experiences from family, friends, and significant others, including peer groups, family, or other approaches that emphasize mindfulness and perceived social support based. In addition, relevant universities should encourage specialized personnel to tailored-make treatments specifically for bereaved students by considering using therapy that supports the use of mindfulness and promotes social connectedness. These are, for example, Acceptance and Commitment Therapy, Mindfulness-based Cognitive Therapy, or Mindfulness-based Therapy in Islamic Psychotherapy (Isgandarova, 2019). However, the influence of these factors on the development of PTG was 27%. Therefore, it is worthwhile to search for other variables that have a great influence on facilitating the development of PTG, such as resilience and positive coping strategies, as well as further study the cognitive variables affecting PTG in different contexts.

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**Data Availability Statement:** The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

**Conflicts of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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