A Causal Model of Parenting Stress Among First-Time Adolescent Mothers

Kingfa Sanglee, Linchong Pothiban, Sujitra Tiansawad, Chavee Baosoung, Darawan Thapinta*

Abstract: Parenting stress affects maternal function and psychological health and development of their child. To prevent or minimize stress among adolescent mothers, understanding how various factors work to influence stress is necessary. Thus, this study aimed to develop and test a causal model of parenting stress in first-time adolescent mothers. A total of 253 first-time postpartum adolescent mothers accessing health services for checking up were recruited from nine hospitals in a northern province in Thailand. Nine instruments were used to collect data: the Parental Distress Subscale of the Parenting Stress Index/Short Form, the Modified Knowledge of Child Development Inventory, the Self-Perception of the Parenting Role Scale, the Parenting Sense of Competence Scale, the Revised Thai Multi-dimensional Scale of Perceived Social Support, the Family Economic Strain Scale, the Kansas Marital Satisfaction Scale, the Child-rearing Conflict Measure, and the What My Baby is Like Questionnaire. Data were analyzed using descriptive statistics, Pearson's product moment correlation, and path analysis with LISREL.

The causal model of parenting stress obtained the best fit with the data. This model could explain 75% of the total variance in parenting stress. Social support, parenting attitude and self-efficacy, and child temperament influenced parenting stress directly. Social support, marital satisfaction, economic strain, child-rearing conflict, and parenting knowledge, attitude, and self-efficacy also indirectly influenced parenting stress. Nurses should design the program for preventing parenting stress in first-time adolescent mothers by emphasis on promoting positive parenting attitude and perceiving adapted child temperament, enhancing parenting self-efficacy and social support.

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Introduction

The adolescent birth rate has emerged as a growing concern worldwide. Globally, the adolescent birth rate in 2018 was 44 per 1,000 women aged 15-19.[1] For South-East Asia, the average adolescent birth rate between 2005-2016 was 33.3 per 1,000

women aged 15-19.[1] In Thailand, the adolescent birth rate was 44.8 per 1,000 women aged 15-19 in 2015 and 42.5 in 2016.[2] In response to a national adolescent birth rate higher than the regional average in South-East Asia, and in accord with Sustainable Development Goals (SDGs), in 2016 the government of Thailand proposed legislation intended to halve the teenage pregnancy rate by 2026.[3]

Becoming a first-time adolescent mother can be a complicated, stressful process because of concurrent developmental and parenting tasks.[4] Adolescent mothers continue to form their own identity while adapting to a maternal role; this contributes to greater parenting stress compared to adult mothers.[5] First-time adolescent mothers may lack the capacity to understand complex issues and feel compassion towards their child, causing parenting stress.[4] Further, most adolescent pregnancies are unplanned and punctuated by inappropriate maternal preparation and inadequate antenatal care,[5] conditions which may induce parenting stress.

Parenting stress occurs when the perceived demands of parenting are discordant with the available resources for child care.[6] This stress negatively affects parental functioning, contributing to poor parenting strategies and behaviors, and negative parent-child interaction and relationship.[7] Decreased confidence in child raising and a negative sense of motherhood can also lead to disrupted maternal role identity formation.[8] Adolescent mothers with parenting stress tend to be careless with child care, use violent behaviors or abandon infant cues and needs.[9] A study revealed that mothers with greater parenting stress were less involved with their infants and used more punitive parenting behaviors.[9] The resulting improper care can lead to child behavior problems, delayed child development, and the activation of a negative parent-child interaction cycle that will in turn increase parenting stress.[9] Parenting stress also directly affects parents' psychosocial health and may cause postpartum depression.[10] Thus, adolescent mothers with parenting stress are at risk of delayed maternal role identity formation and postpartum depression leading to improper child development and behavior problems.

Parenting stress can occur at any postpartum stage. A woman learns to become a mother within her social system context.[8] During the first few months, she must gradually integrate the maternal role into her lifestyle and be less beholden to the social system context; eventually achieving maternal identity approximately four months postpartum.[8] Therefore, the stage after giving birth to the first few months of maternal identity formation is a critical period that can induce stress for mothers, especially first-time adolescent mothers. Adolescent mothers needing to satisfy both developmental and parental tasks may experience frustration and stress.[4]

To prevent or reduce parenting stress, influencing factors must be explicitly examined. Most studies of factors influencing parenting stress in adolescent mothers have been conducted at more than four months postpartum, with a few studies undertaken at 4-6 weeks postpartum. Models of parenting stress in adolescent mothers at more than four months postpartum may not satisfactorily explain the parenting stress of first-time adolescent mothers at 4-6 weeks postpartum. Investigation of how specific factors influence parenting stress at 4-6 weeks postpartum is needed. Thus, this study aimed to develop and test a causal model of parenting stress among Thai adolescent first-time mothers at 4-6 weeks postpartum. The findings will benefit nurses in developing effective programs to prevent or minimize parenting stress, help adolescent mothers better adapt and achieve maternal role identity, and promote effective parenting.

Review of Literature and Theoretical Framework

Abidin[11] and Belsky[12]proposed the Parenting Stress Model, identifying three domains of determinants of parenting stress including parent characteristics

(such as personality, beliefs, self-confidence, attachment to the child, and psychological well-being), contextual characteristics (such as social networks and the family interactional context and conflict), and child characteristics (such as temperament and pro-social and problem behaviors). Based on Abidin's model and literature review, factors frequently found to relate to parenting stress in adolescent mothers include cognitive readiness for parenting and parenting self-efficacy.[13-18] Moreover, social support, marital satisfaction, economic strain, and child-rearing conflict, as well as child temperament, were reported as parenting stress associates.[18-28]

Cognitive readiness for parenting encompasses parenting knowledge and attitude towards parenting.[14] Parenting knowledge refers to an understanding of child development and appropriate parenting practices that affects how mothers raise their child.[15] Greater parenting knowledge associates with more sensitive parenting, a positive sense of parenting and emotional development in children,[16] and less parenting stress.[13] Parenting attitude refers to the internal state of an individual that reacts favorably or unfavorably toward parenting.[17] Mothers with positive parenting attitude tend to prepare themselves for the parenting role better, which helps them approach child-rearing situations with less stress.[17]

Parenting self-efficacy refers to a parent's confidence in their ability to perform or manage tasks related to parenting.[13] When mothers have a high level of parenting self-efficacy, they may perform or manage child-rearing activities and respond to the child's needs well.[13] A study found that the parenting self-efficacy of young African-American mothers negatively correlated with parenting stress.[13] Similarly, in Thailand, parenting self-efficacy was a significant predictor of parenting stress in adolescent mothers.[18]

Social support is a contextual characteristic that refers to the perceived help available to a person from friends, family, and significant others.[19] Social support enables adolescent mothers to share their experiences, doubts, and frustrations with others during pregnancy and child-rearing, which allows them to be more relaxed and attached to their child.[20] Social support improves parenting knowledge and self-efficacy, and perceiving adapted child temperament.[21] A study found that social support negatively associated with and predicted parenting stress in adolescent mothers.[22]

Marital satisfaction, another contextual characteristic, is a subjective experience of one's happiness and contentment with the marital relationship.[23] Unsatisfying marriages contribute to emotional stress, and mothers unsatisfied with their marital relationship are more stressed in life.[24] They tend to face economic hardship because they may not receive tangible support from the child's father or family, and a study revealed a negative relationship among marital satisfaction, economic strain, and parenting stress in adolescent mothers.[24]

Economic strain refers to a perception of the adolescent mother regarding the current financial situation including the adequacy of financial resources, financial concerns and worries, and expectations regarding the future economic situation.[25] It was found that economic strain contributed to parenting stress in adolescent mothers.[25] Child-rearing conflict refers to disagreement or discord related to child-rearing between the mothers and persons who help them raise a child.[26] In Thailand, after giving birth, adolescent mothers usually live and raise their child at either their own parents' home or partner's home. Therefore, their mothers or mothers-in-law participate in child-rearing, and differences in opinion regarding child-rearing may cause conflict and result in parenting stress.[24,26]

Child temperament encompasses how a child is perceived by others. A child's temperament may be perceived as easy, shy, slow to warm up, difficult, or challenging.[27] Child temperament characteristics can affect the interaction between mother and the child. Difficult children tend to show negative moods,

non-adaptability, high reactivity, strong emotional intensity, and are highly demanding that cause parenting stress.[27] Previous findings indicate that parental perception of child difficulty is positively associated with and predictive of parenting stress. [18,28]

All the aforementioned factors influencing parenting stress in adolescent mothers at late postpartum may also influence parenting stress at 4-6 weeks postpartum. From a literature review, factors affecting parenting stress in first-time adolescent mothers at 4-6 weeks postpartum were less evidently known. Therefore, developing a causal model of parenting stress is necessary to enhance better understanding of the manageable influencing factors that directly and indirectly affect parenting stress among first-time adolescent mothers. The hypothesized model of the Model of Parenting Stress in Adolescent Mothers (MPS-AM), which was based on the Parenting Stress Model of Abidin[11] and the literature reviews, depicting the interrelationship of factors influencing parenting stress of first-time adolescent mothers is shown in **Figure 1.**

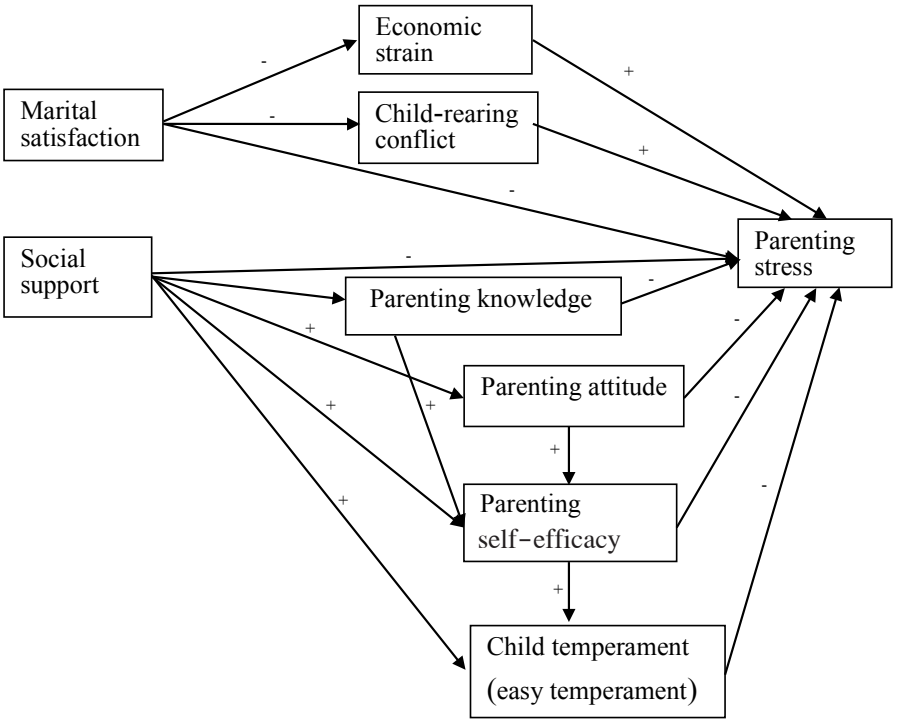

Figure 1: The hypothesized model of the Model of Parenting Stress in Adolescent Mothers (MPS-AM).

Methods

Design: This study used a correlation model testing design.

Sample: The sample included first-time adolescent mothers receiving postpartum health check-up at nine hospitals in one province of northern Thailand. The participants were selected based on the following inclusion criteria: 1) being at 4-6 weeks postpartum period; 2) having a full-term, healthy baby; and 3) being able to understand Thai language. The exclusion criteria included having any complications during delivery and postpartum periods, and not taking any part in raising their child.

The sample size was determined using a general rule of thumb recommending the minimum sample size of 200 or 5-20 times the number of parameters.[29] In this study, there were 26 estimated parameters (calculated from 17 loadings of the nine observed variables plus nine measurement errors). Thus, the sample size was 253 (5-20 participants per estimated parameter).[29]

Ethical Considerations: Ethical approval was granted by the Research Ethics Committee at the Faculty of Nursing, Chiang Mai University (approval - FULL: 004-2016) and the nine hospitals. Ethical considerations, including the nature and processes of the study, anonymity and confidentiality issues, voluntary involvement, and the right to withdraw at any time without repercussions, were explained to all eligible potential participants. When mothers agreed to participate, they were asked to sign a consent form. The informed consent of participants younger than 18 years of age was granted by their parents along with their assent.

Instruments: Nine instruments were used to collect data. Five translated instruments were used to collect data with permission. Four instruments, the Knowledge of Child Development Inventory (KIDI), the Self-Perception of the Parenting Role scale (SPPR), the Family Economic Strain Scale (FESS), and the Child-Rearing Conflict Measure, were translated into Thai with permission by the primary investigator (PI) using the back-translation technique[30], with accuracy testing done by two bilingual experts. Discrepancies in the translated instruments were then identified and adjustments made. The content validity of the four instruments was tested by six experts, including three obstetric nursing and three pediatrics nursing experts. The content validity index (CVI), the examples of items, and reliability of the instruments are shown in **Table 1**. All instruments are described below.

Table 1 Validity, reliability and sample of item of the instruments

Instruments and sample items	CVI	Cronbach's alpha coefficient	
		Preteststudy (n=10)	actual study (n=253)
Parental Distress Subscale of the Parenting Stress Index/Short Form (PSI-SF)*	-	.86	.89
Modified Knowledge of Child Development Inventory (M-KIDI): "Newborn babies recognize stories and music they heard before they were born." "Four-month-olds lying on their stomach start to lift their heads."	.97	.79	.88
Self-Perception of the Parenting Role scale (SPPR): "Being a parent is a satisfying experience to some adults BUT for other parents, being a parent is not all that satisfying."	1.00	.81	.86
Parenting Sense of Competence Scale (PSOC): "Some parents have clear ideas about the right and wrong ways to rear children."	-	.84	.83
Revised Thai Multi-dimensional Scale of Perceived Social Support (the Revised MSPSS): "My family really tries to help me."	-	.80	.93
Family Economic Strain Scale (FESS): "I experience money problems"	1.00	.83	.86

Table 1 Validity, reliability and sample of item of the instruments (Cont.)

Instruments and sample items	CVI	Cronbach's alpha coefficient	
		Preteststudy (n=10)	actual study (n=253)
Kansas Marital Satisfaction Scale (KMSS): "How satisfied are you with marriage?"	-	.82	.88
Child-Rearing Conflict Measure: "How often disagreements occurred with your parent over how to take care of the baby."	1.00	.85	.82
What My Baby is Like Questionnaire (WBL): " How difficult it is to calm your baby?"	-	.82	.82

Note: * the copyright owner did not allow publishing of any item here.

The Personal Data Profile Form was developed by the principal investigator (PI) for gathering personal data such as age, education, socio-economic status, pregnancy intention, prior experience of child-rearing, and receipt of knowledge or training for parenting during pregnancy and postpartum.

The Parental Distress Subscale of the Parenting Stress Index/Short Form (the PD subscale of the PSI-SF), Thai version, was used to measure parenting stress. The PSI-SF was developed by Abidin[11] and translated into Thai by Psychological Assessment Resources Inc. (PAR). The PD subscale of the PSI-SF consists of 12 Likert-type items with five points responses ranging from 1 (strongly disagree) to 5 (strongly agree). The possible scores range from 12 to 60, with a higher score indicating higher perceived parenting stress.

The Modified Knowledge of Child Development Inventory (M-KIDI), Thai version, was used to assess parenting knowledge. The original KIDI was developed by MacPhee[15] and consisted of 58 items. The PI translated the KIDI into Thai and modified for appropriate use within the context of the study. The M-KIDI, Thai version, consists of 37 items. The first 26 items ask participants to indicate whether they agree, disagree or are unsure about normative child behavior. The other 11 items ask participants to indicate whether they agree, disagree or are unsure about the developmental milestones of the child. If they disagree, they must indicate whether a younger or older child would be able to achieve that developmental milestone. The number of correct answers was taken to produce a total score. The possible score ranges from 0 to 37, with a higher total score indicates higher parenting knowledge.

The Self-Perception of the Parenting Role Scale (SPPR), Thai version, was used to measure parenting attitude. MacPhee, Benson, and Bullock[31] developed the original SPPR, with a Thai version translated by the PI. Consisting of 22 items, the SPPR is a self-completion scale in which each item has paired statements with contrasting endpoints. Participants are asked to decide which of the statements best describes them, and then answer whether that statement is sort of true or really true for them. The four possible responses include 1, 2, 4, and 5, with 1 indicative of low perceived competence, investment, satisfaction or role balance, and 5 indicatives of high perceived competence, investment, satisfaction or role balance. The possible score ranges from 22 to 110, with a higher score associated with a more positive parenting attitude.

The Parenting Sense of Competence Scale (PSOC) developed by Gibaud-Wallston and Wandersman, as cited in Johnston and Mash[32] and translated into Thai by Soomlek,[33] was used to assess parenting self-efficacy. The PSOC consists of 17 Likert-type items with six points ranging from 1 (strongly agree) and 6 (strongly disagree). The possible score ranges from 17 to 102, with a higher score indicating higher perceived parenting self-efficacy.

The Revised Thai Multi-dimensional Scale of Perceived Social Support (the Revised MSPSS) was used to examine social support. This instrument was developed by Zimet, Dahlem, Zimet, and Farley[19] and translated into Thai and revised by Wongpakaran and Wongpakaran.[34] The Revised MSPSS consists of 12 Likert-type items with seven points responses ranging from 1 (very strongly disagree) to 7 (very strongly agree). The possible score ranges from 12 to 84, with a higher score indicating higher perceived social support.

The Family Economic Strain Scale (FESS) developed by Hilton and Devall[25] was translated into Thai by the PI for examining economic strain. The FESS consists of 13 Likert-type items with five points responses ranging from 1 (far below average) to 5 (far above average). The first 12 items ask the participants to rate the frequency with which they experience strain related to financial inadequacy, worries and concerns about their financial situation, and financial problems interfering with their life. The final item asks the participants to evaluate their income relative to other families. The possible score ranges from 13 to 65, with a higher score indicating a higher perceived level of economic strain.

The Kansas Marital Satisfaction Scale (KMSS) was used to assess marital satisfaction. The KMSS was developed by Schumm, Scanlon, Crow, Green, and Buckler[35] and translated into Thai by Boonnate.[36] The KMSS consists of 3 Likert-type items examining satisfaction with marriage, husband, and relationship with husband, with seven points responses ranging from 1 (extremely dissatisfied) to 7 (extremely satisfied). The possible score ranges from 3 to 21, with a higher score indicating a higher level of marital satisfaction.

The Child-Rearing Conflict Measure developed by Spencer, Kalil, Larson, Spieker, and Gilchrist[26] was translated into Thai by PI for assessing child-rearing conflict. It consists of 5 Likert-type items with five points responses ranging from 1 (never) to 5 (very often). The possible score ranges from 5 to 25, with a higher score indicating higher confliction of child-rearing.

The *What My Baby is Like Questionnaire (WBL),* developed by Pridham, Chang and Chiu[37] and translated into Thai by Phumonsakul,[38] was used to explore child temperament. This tool was designed to explore mothers' characterization of their infant's temperament. The WBL consists of 19 items with a nine-point rating scale graphed at equal intervals. The possible score ranges from 19 to 171, with a higher score indicating the higher perceived adaptability of an infant.

Data collection procedures: The PI or the trained research assistant (RI) identified potential participants from patient records and on postpartum check-up day also screened each participant's eligibility. Potential participants were informed about the study and their ethical rights and were asked to participate. Those consenting to participate signed a consent form, 73 participants who were younger than 18 years-old granted by their parents along with their assent. Participants were given the questionnaires to complete in privacy. As completing the questionnaires took approximately 80-105 minutes, participants were permitted to take up to three breaks at their discretion. Data collection was undertaken concurrently at nine hospitals from December 2016 to May 2017.

Data Analysis: Path analysis using the Generalized Least Squares (GLS) technique within LISREL tested the causal relationship between eight factors and parenting stress.

Results

Demographic characteristics of the sample: The age of the participants ranged from 15 to 19 years, with a mean of 17.89 (SD = 1.33). Most participants were married (88.1%), had completed junior school (42.7%), were housewife/unemployed (71.5%), and had a monthly family income of fewer than

10,000 THB or 316.48 USD (49.4 %) that mostly came from their husband (47.8%) and their parents (43.1%). Over half of participants lived at their parents' home (50.2%). The majority of participants did not plan for pregnancy (56.5%) and did not have child-rearing experience (60.1%) but received knowledge of child-rearing before pregnancy (75.9%) and received knowledge or trained for taking a parenting role during pregnancy (80.2%) and the postpartum period (92.2%).

Characteristics of the study variables: Parenting stress scores ranged from 15-57 out of 60 with a mean of 36.64 (SD = 8.3). Parenting attitude had a strong negative relationship with parenting stress. Parenting self-efficacy, social support, and child temperament had a moderate negative correlation with parenting stress. Parenting knowledge and marital satisfaction showed a low negative relationship with parenting stress. However, economic strain and child-rearing conflict had a low positive relationship with parenting stress (see **Table 2**).

Testing of Parenting Stress Model: Data analysis revealed that the hypothesized model with all proposed indices did not fit with the observed data. Therefore, model modification was undertaken based on statistics values, theoretical reasoning, and literature support.[29] Five paths with a parameter estimate of <.08 and non-significant path were eliminated, while five paths with a large modification index that can be interpreted substantively were added.[29] After modification, the final model fitted with the data (χ^2 = 23.79, df = 17, p = 0.13, RMSEA = 0.040, GFI = .98, AGFI = .95, CFI = .97; standard of fit: χ^2 = p > .05 , RMSEA ≤ .05, GFI ≥ .90, AGIF ≥ .90, CFI ≥ .90).[29] All coefficient paths in the final model were statistically significant and all predicting variables including social support, marital satisfaction, economic strain, child-rearing conflict, parenting knowledge, attitude and self-efficacy, and child temperament could explain 75% of the variation in parenting stress among first-time adolescent mothers. Parenting stress was directly influenced by parenting attitude and self-efficacy, social support, and child temperament. Parenting stress was also indirectly influenced by marital satisfaction, social support, economic strain, child-rearing conflict, and parenting knowledge, attitude, and self-efficacy (see Figure 2). Parenting attitude was the strongest influential factor while parenting knowledge was the weakest. (**see Table 3**).

Table 2 Mean (M), standard deviation (SD), and correlation coefficients of the study variables and parenting stress (n = 253)

Study Variables	M	SD	Possible score	1	2	3	4	5	6	7	8	9
Marital satisfaction	11.12	3.38	7-21	1	.32**	-.37**	-.27**	-.03^{ns}	-.35**	.20**	.37**	-.37**
Social support	55.62	12.57	12-84		1	-.18**	-.17**	.13*	.40**	.32**	.38**	-.50**
Economic strain	32.75	7.58	13-65			1	.30**	-.05^{ns}	-.31**	-.21**	-.26**	.32**
Child-rearing conflict	13.77	3.79	5-25				1	-.19**	-.34**	-.26**	-.26**	.32**
Parenting knowledge	13.74	4.10	0-37					1	.13*	.33**	.16**	-.15*
Parenting attitude	71.58	9.22	22-110						1	.44**	.53**	-.83**
Parenting self-efficacy	54.71	4.44	17-102							1	.38**	-.51**
Child temperament	110.21	13.11	19-171								1	-.58**
Parenting stress	36.64	8.38	12-60									1

Note: **p < .01, *p < .05, ns = not statistically significant

Table 3 Direct and indirect standardized coefficient for the final model

Cause-Effect	Direct effect	Indirect effect	Total effect
Parenting attitude ⟶ Parenting self-efficacy	0.36***	-	0.36***
Parenting attitude ⟶ Child temperament	0.36***	0.05^{ns}	0.41***
Parenting attitude ⟶ Parenting stress	-0.65***	-0.09**	-0.74***
Parenting self-efficacy ⟶ Child temperament	0.13*		0.13*
Parenting self-efficacy ⟶ Parenting stress	-0.11*	-0.02*	-0.13*
Child temperament ⟶ Parenting stress	-0.12**	-	-0.12**
Economic strain ⟶ Child-rearing conflict	0.18**	-	0.18**
Economic strain ⟶ Parenting attitude	-0.19**	-0.04*	-0.23**
Economic strain ⟶ Parenting self-efficacy	-	-0.08**	-0.08**
Economic strain ⟶ Child temperament	-	-0.09**	-0.09**
Economic strain ⟶ Parenting stress	-	0.17**	0.17**
Child-rearing conflict ⟶ Parenting attitude	-0.24**	-	-0.24**
Child-rearing conflict ⟶ Parenting self-efficacy	-	-0.09**	-0.09**
Child-rearing conflict ⟶ Child temperament	-	-0.10**	-0.10**
Child-rearing conflict ⟶ Parenting stress	-	0.17**	0.17**
Parenting knowledge ⟶ Child-rearing conflict	-0.17**	-	-0.17**
Parenting knowledge ⟶ Parenting attitude	-	0.04	0.04^{ns}
Parenting knowledge ⟶ Parenting self-efficacy	-	0.01*	0.01*
Parenting knowledge ⟶ Child temperament	-	0.02*	0.02*
Parenting knowledge ⟶ Parenting stress	-	-0.03*	-0.03*
Marital satisfaction ⟶ Economic strain	-0.39***	-	-0.39***
Marital satisfaction ⟶ Child-rearing conflict	-0.22**	-0.08*	-0.30**
Marital satisfaction ⟶ Parenting attitude	-	0.14*	0.14*
Marital satisfaction ⟶ Parenting self-efficacy	-	0.05*	0.05*
Marital satisfaction ⟶ Child temperament	0.21**	0.06**	0.27**
Marital satisfaction ⟶ Parenting stress	-	-0.13***	-0.13***
Social support ⟶ Parenting knowledge	0.14***	-	0.14***
Social support ⟶ Child-rearing conflict	-	-0.02*	-0.02*
Social support ⟶ Parenting attitude	0.34***	0.01**	0.35**
Social support ⟶ Parenting self-efficacy	0.15**	0.13**	0.28**
Social support ⟶ Child temperament	0.15**	0.16***	0.31**
Social support ⟶ Parenting stress	-0.17***	-0.30**	-0.47**

Note: ***p < .001, **p < .01, *p < .05, ns = not statistically significant

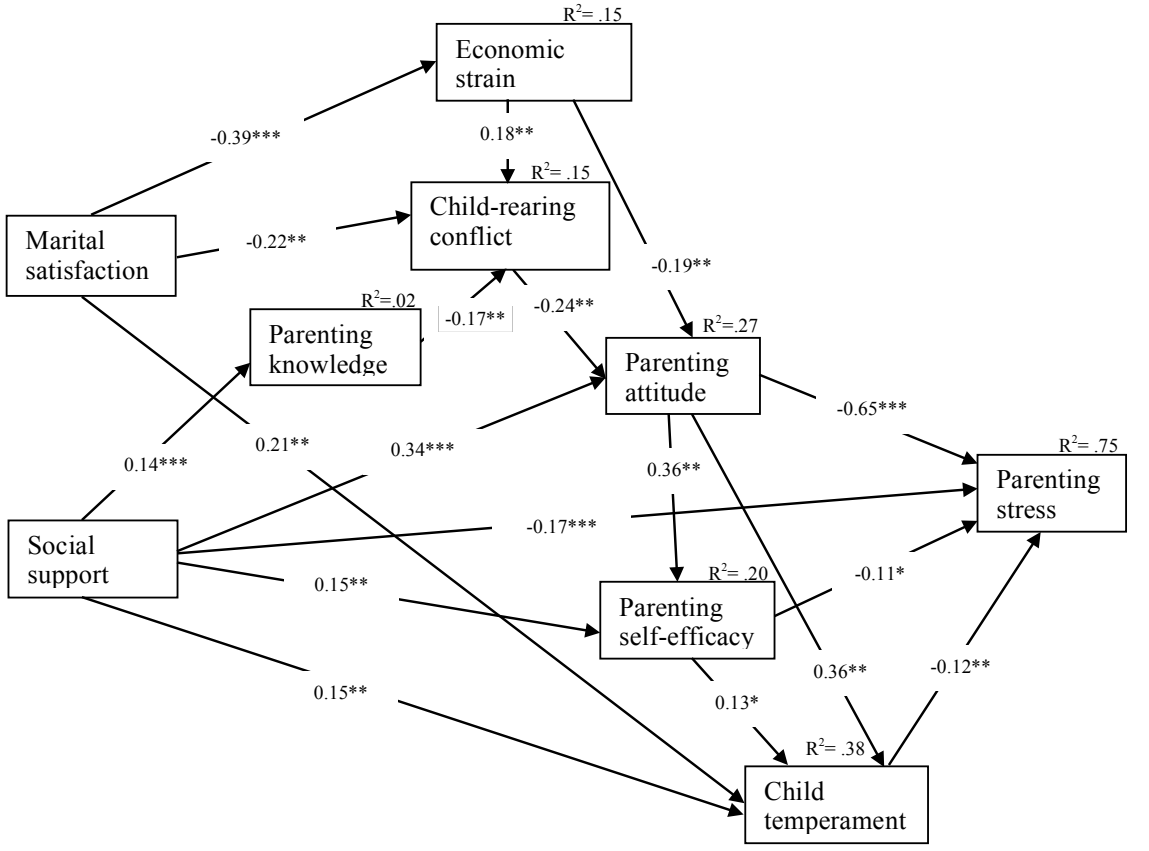

Figure 2: The final modified model of the Model of Parenting Stress in Adolescent Mothers (MPS-AM).

Chi-square (χ^2) = 23.79,df = 17, p = 0.13, RMSEA = 0.040, GFI= .98, AGFI = .95, CFI = .97
Note: ***p < .001, **p < .01, *p < .05 Standard of fit: χ^2 = p > .05 , RMSEA ≤ .05, GFI ≥ .90, AGIF ≥ .90, CFI ≥ .90

Discussion

The modified MPS-AM supports the Parenting Stress Model of Abidin's three domains[11] in that influences on parenting stress include parent, contextual, and child characteristics. Regarding parent characteristics, parenting attitude strongly and directly influenced parenting stress, while parenting knowledge showed low and indirect effect on parenting stress. All selected factors of contextual characteristics were associated with parenting stress. Social support had both direct and indirect effects on parenting stress, while the other factors had only an indirect effect. Child temperament also directly influenced parenting stress.

In this MPS-AM model, marital satisfaction had no direct effect on parenting stress but had indirect effect through economic strain and child-rearing conflict. Then economic strain and child-rearing conflict influenced parenting stress through parenting attitude, parenting self-efficacy, and child temperament. Adolescent mothers who have a poor relationship with the partner or an unsatisfying marital relationship tend to face economic hardship because they may not receive tangible support from their partner or partner's family. Bearing the entire burden of child-rearing costs can cause a negative attitude towards their parenting role, child-rearing conflict, low parenting self-efficacy, and perceptions of the child as difficult to handle, leading

to parenting stress. Adolescent mothers who have a satisfying marital relationship may have low economic strain and child-rearing conflict that promote positive parenting attitude. When adolescent mothers have positive parenting attitude, they tend to prepare themselves for the parenting role by searching for child-rearing information and learning about child-rearing from many sources.[17] Concurrently, they gain greater parenting self-efficacy which helps them to cope with child-rearing problems, arrange child-rearing activities better, and use proper strategies to manage and respond to the child's needs.[13] Therefore, they may perceive their child as easy to handle and experience less stress in the parenting role. Additionally, marital satisfaction also had an indirect effect on parenting stress through child temperament. It is possible that when the mothers have marital satisfaction, they tend to perceive their child temperament as easy to handle and that reduces parenting stress.

In the present study, social support directly influenced parenting stress. It confirmed the work of Belsky[12] and Abidin[11] in that social support determines the quality of parenting practices and effects on parenting stress. Social support provides mothers with information on child development and appropriate child-rearing practices. This information promotes positive maternal role expectations and enhances parenting skills which lead to less stress in child care. Social support also indirectly influenced parenting stress through parenting knowledge, parenting attitude and self-efficacy, and child temperament. Based on the findings, most participants lived in their parents' house. This condition facilitated the exchange of feelings, opinions, and knowledge related to child-rearing practices and child development among adolescent mothers and other family members. Also, most participants reported that they received information and training regarding parenting skills, such as breastfeeding and bathing the baby, from health service providers during pregnancy and postpartum. These circumstances enabled mothers to gain knowledge of child-rearing practices, child development, and parenting role, and subsequently, take care of their child and handle child-rearing problems well. Such support contributed to positive attitudes towards parenting, increased self-confidence in parenting and perceptions of child temperament as easy. Therefore, it can be concluded that mothers who have greater social support will have more parenting knowledge, positive parenting attitude and higher parenting self-efficacy, and perceptions of child temperament as easy to handle, and decrease parenting stress. The relationship between social support and parenting stress is noteworthy. The direct effect of social support on parenting stress was less than the total effect. It is possible that parenting knowledge, child-rearing conflict, parenting attitude and self-efficacy, and child temperament might be mediating factors between social support and parenting stress.

Regarding previous models of parenting stress, Chang and colleagues[13] focused on parent and child characteristics. However, they did not include the social context which is very important for transitioning to be a mother. Social context always affects daily lifestyle including raising a child and being a mother, especially during the postpartum period of Thai people. Younger[39] had proposed a theoretical model of parenting stress based on existing empirical evidence. Nevertheless, this model did not include child characteristics. A study by Ostberg and Hagekull[40] focused on the parent, contextual and child characteristics. However, their model did not include parent factors that are manageable to prevent and reduce parenting stress, such as parenting attitude and self-efficacy. Their model focused on maternal age and education, parity and workload. To prevent or minimize parenting stress in adolescent mothers all three domains should be considered.

Limitations

Using only self-report questionnaires for gathering data was a limitation of this study. Various methods, such as observation of stress and maternal behaviors while taking care of the child, should also be used in evaluating parenting stress.

Conclusions and Implications for Nursing Practice

Parenting stress among adolescent mothers can be predicted by social support, marital satisfaction, economic strain, child-rearing conflict, parenting knowledge, attitude and self-efficacy, and child temperament. These results provide insights for nurses or midwives working in antenatal care clinics, postpartum wards, and postpartum check-up clinics to create programs to help prevent parenting stress in first-time adolescent mothers. Such programs should emphasize on promotion of positive parenting attitude and percieving adapted child temperament as well as enhancing parenting self-efficacy and social support. Promoting family and spouse support and preparing family members to mentor the mothers during pregnancy and the postpartum period is also essential. These key people will help the mother cope with child-rearing and minimize the stress of the first-time adolescent mothers.

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References

1. World Health Organization. Global health observatory (GHO) data [cited 2018 August 15]. Available from http://www.who.int/gho/maternal_health/reproductive_health/ adolescent_fertility/en/
2. Department of Health. Department of health annual report 2017 [Internet] Bangkok: Graphic Design Press [2018 Feb] [cited 2018 August 15]. Available from http://planning.anamai.moph.go.th/download/D_report_year/Report_DoH61.pdf
3. Bureau of Reproductive Health. Act for prevention and solution of the adolescent pregnancy problem, B.E. 2559 (2016). [2016] [cited 2017 December 15]. Available from http://rh.anamai.moph.go.th/download/all_file/index/Teen%20Pregnancy%20Act%20Certified%20Version%20(1).pdf
4. Wakschlag LS, Hans SL. Early parenthood in context: Implications for development and intervention. In Zeanah CH. Handbook of infant mental health. 2nd ed. New York: The Guilford Press Publishers; 2000, pp. 129-144.
5. Bailey NS. Perceived social support and cognitive readiness to parent as predictors of attachment, parenting style, and parenting stress: A comparative study of adult and adolescent mothers [dissertation]. [New York]: Pace Univ.; 2014. 67p.
6. Abidin RR. The determinants of parenting behaviors. J Clin Child Psychol. 1992 21(4): 407-412.
7. Calkin SD, Hungerford A, Dedmon SE. Mothers' interactions with temperamentally frustrated infants. Infant Ment. Health J. 2004 25(3): 219-239.
8. Mercer RT. Becoming a mother versus maternal role attainment. J Nurs Scholarsh. 2004 36(3): 226-232.
9. Smith TK. The relationship between knowledge, attributions and behavior in adolescent mothers: Implications for child outcomes. Santa Barbara: University of California; 2001. 242p.
10. Venkatesh KK, Phipps MG, Triche EW, Zlotnick C. The Relationship between parental stress and postpartum depression among adolescent mothers enrolled in a randomized controlled prevention trial. Matern Child Health J. 2014 18(6): 1532-1539.
11. Abidin RR. Parenting stress index, third edition: Professional manual psychological assessment resources [1995] [cited 2015 March 20]. Available from https://www.researchconnections.org/childcare/resources/298
12. Belsky J. The determinants of parenting: A process model. Child Dev. 1984 55(1): 83-96.
13. Chang Y, Fine M A. Modeling parenting stress trajectories among low-income young mothers across the child's second and third years: Factors accounting for stability and change. J. Fam. Psychol. 2007 21(4): 584-594.
14. Rafferty Y, Griffin KW, Lodise M. Adolescent motherhood and developmental outcomes of children in early head start: The influence of maternal parenting behaviors, well-being, and risk factors within the family setting. Am J Orthopsychiatry. 2011 81(2): 228-245.
15. MacPhee D. Knowledge of infant development inventory. Unpublished manual and questionnaire. Chapel Hill: University of North Carolina; 1981. 15p.
16. Huang K, Teti D, Caughly M, Feldstein S, Genevro J. Mother-child conflict interaction in the toddler years: Behavior patterns and correlates. J Child Fam Stud. 2007 16(2): 219-241.

17. Holden GW, Buck MJ. Parental attitudes toward childrearing. In Bornstein MH. Handbook of parenting, Vol. 3: Being and becoming a parent. 3nd ed. Mahwah, NJ: Lawrence Erlbaum Associates Publishers; 2012, pp. 537-562.
18. Charoensatsiri R, Chaimongkol N, Pongjaturawit Y. Factors predicting parenting stress in adolescent mothers of first-born infants. J Prapokklao Hosp Clin Med Educat Center. 2014 31(2): 105-113.
19. Zimet GD, Dahlem NW, Zimet SG, Farley GK. The Multidimensional Scale of Perceived Social Support. J. Pers. Assess. 1988 52(1): 30-41.
20. Rhodes JE, Woods M. Comfort and conflict in the relationships of pregnant, minority adolescents: Social support as a moderator of social strain. J Community Psychol. 1995 23(1): 74-84.
21. Dukewich TL, Borkowski JG, Whitman, TL. Adolescent mothers and child abuse potential: An evaluation of risk factors. Child Abuse Negl. 1996 20(11): 1031-1047.
22. Wacharasin C, Thienpichet S, Deoisres W. Predicting maternal stress of mothers having children age 0-3 years. The Public Health Journal of Burapha University. 2011 6(1): 32-41 [in Thai].
23. Hendrick SS, Hendrick C. Love and satisfaction. In Sternberg RL, Hojjat M. Satisfaction in close relationships. New York: Guilford; 1997, pp. 56-78.
24. Larson NC. Parenting stress among adolescent mothers in the transition to adulthood. Child Adolesc Social Work J. 2004 21(5): 457-476.
25. Hilton JM, Devall EL. The family economic strain scale: Development and evaluation of the instrument with single- and two-parent families. J Fam Econ Issues. 1997 18(3): 247-271.
26. Spencer MS, Kalil A, Larson NC, Spieker SJ, Gilchrist LD. Multigenerational co-residence and childrearing conflict: Links to parenting stress in teenage mothers across the first two years postpartum. Appl. Dev. Sci. 2002 6(3), 157-170.
27. Chess S, Thomas A. Origins and evolution of behavior disorders. New York: Brunner; 1984.
28. Manachevahul S, Prasopkittikun T, Sangperm P. Factors predicting parenting stress in mothers of infants. Journal of Nurses' Association of Thailand, North-Division. 2012 30(1): 53-62 [in Thai].
29. Pui-Wa, L, Qiong W. Introduction to structural equation modeling: Issues and practical considerations. Educ. Meas. 2007 26(3): 33-43.
30. Son, J. Back translation as a documentation tool. Transl. Interpret. 2018 10(2): 89-100.
31. MacPhee D, Benson JB, Bullock D. Influences on maternal self -perceptions. Unpublished manuscript. Colorado State Univ.; 1986.
32. Johnston C, Mash E J. A measure of parenting satisfaction and efficacy. J Clin Child Adolesc Psychol. 1989 18(2): 167-175.
33. Soomlek S. A Causal model of maternal role mastery among first-time mother [dissertation]. [Bangkok]: Mahidol Univ.; 1995. 125p.
34. Wongpakaran N, Wongpakaran, T. A revised Thai multi-dimensional scale of perceived social support. Span J Psychol. 2012 15(3): 1503-1509.
35. Schumm WR, Scanlon, ED, Crow CL, Green DN, Buckler DL. Characteristics of the Kansas marital satisfaction scale in a sample of 79 married couples. Psychol. Rep. 1983 53(2): 583-588.
36. Boonate N. (2014). Factors predicting occurrence of intimate partner violence during pregnancy among Thai pregnancy women [dissertation]. [Chiang Mai]: Chiang Mai Univ.; 2014. 122p.
37. Pridham KF, Chang AS, Chiu Y. Maternal parenting self-appraisals: The contribution of perceived infant temperament. Res Nurs Health. 1994 17(5): 381-392.
38. Phumonsakul S. (2000). A structural equation model of maternal role attainment among working primiparous mothers [dissertation]. [Bangkok]: Mahidol Univ.; 2000. 224p.
39. Younger, J.B. (1991). A model of parenting stress. Res Nurs Health, 14:197-204.
40. Ostberg, M., & Hagekull, B. (2000). A structural modeling approach to the understanding of parenting stress. J. Clin. Child Psychol, 29(4), 615-625.

แบบจำลองเชิงสาเหตุของความเครียดจากการเลี้ยงดูบุตรในวัยรุ่นที่เป็นมารดาครั้งแรก

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บทคัดย่อ: ความเครียดจากการเลี้ยงดูบุตรส่งผลต่อการทำหน้าที่มารดาและสุขภาพจิตของมารดา ซึ่งส่งผลต่อพัฒนาการของทารก การศึกษาปัจจัยที่เกี่ยวข้องกับความเครียดจากการเลี้ยงดูบุตรจึงมีความจำเป็นในการวางแผนป้องกันหรือลดความเครียดจากการเลี้ยงดูบุตรในมารดาวัยรุ่น การศึกษานี้มีวัตถุประสงค์เพื่อพัฒนาและทดสอบแบบจำลองเชิงสาเหตุของความเครียดจากการเลี้ยงดูบุตรในวัยรุ่นที่เป็นมารดาครั้งแรก กลุ่มตัวอย่างคือวัยรุ่นที่เป็นมารดาครั้งแรก จำนวน 253 คน ที่รับการตรวจหลังคลอด ณ โรงพยาบาล 9 แห่งในจังหวัดหนึ่งทางภาคเหนือของประเทศไทย เก็บรวบรวมข้อมูลด้วยแบบสอบถาม จำนวน 9 ฉบับ ได้แก่แบบสอบถามความเครียดในการเลี้ยงดูบุตร แบบวัดความรู้เกี่ยวพัฒนาการและการดูแลตามพัฒนาการของทารก แบบสอบถามการรับรู้บทบาทการเป็นมารดา แบบสอบถามการรับรู้ความสามารถในการเป็นมารดา แบบสอบถามความรู้สึกหลากหลายมิติเกี่ยวกับความช่วยเหลือทางสังคม (ฉบับปรับปรุงภาษาไทย) แบบสอบถามความตึงเครียดทางเศรษฐกิจในครอบครัว แบบสอบถามความพึงพอใจในชีวิตสมรส แบบสอบถามความขัดแย้งในการดูแลบุตรและแบบวัดคุณลักษณะบุตร สถิติที่ใช้วิเคราะห์คือ สถิติพรรณนา สถิติสหสัมพันธ์เพียร์สันและการวิเคราะห์เส้นทางโดยโปรแกรมลิสเรล

ผลการศึกษาพบว่าแบบจำลองเชิงสาเหตุของความเครียดจากการเลี้ยงดูบุตรในสตรีวัยรุ่นที่เป็นมารดาครั้งแรกมีความสอดคล้องกับข้อมูลเชิงประจักษ์ และสามารถทำนายความแปรปรวนของความเครียดจากการเลี้ยงดูบุตรได้ร้อยละ 75 โดยที่แรงสนับสนุนทางสังคม ทัศนคติต่อการเป็นมารดา การรับรู้ความสามารถในการเป็นมารดาและคุณลักษณะของทารก มีอิทธิพลโดยตรงต่อความเครียดจากการเลี้ยงดูบุตร นอกจากนี้แรงสนับสนุนทางสังคม ความพึงพอใจในคู่สมรส ความตึงเครียดทางเศรษฐกิจ ความขัดแย้งในการเลี้ยงดูบุตร ความรู้ในการเป็นมารดา ทัศนคติต่อการเป็นมารดา และการรับรู้ความสามารถในการเป็นมารดา มีอิทธิพลทางอ้อมต่อความเครียดในการเลี้ยงดูบุตร ดังนั้นควรสร้างโปรแกรมเพื่อป้องกันหรือลดความเครียดจากการเลี้ยงดูบุตรโดยส่งเสริมให้สตรีวัยรุ่นที่เป็นมารดาครั้งแรกมีทัศนคติที่ดีต่อการตั้งครรภ์ ส่งเสริมให้มีการรับรู้ความสามารถในการเป็นมารดา ส่งเสริมการสนับสนุนทางสังคมและส่งเสริมให้มีการรับรู้ลักษณะทารกที่ดี

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คำสำคัญ: มารดาวัยรุ่น รูปแบบเชิงเหตุผล การเป็นบิดามารดา บทบาทการเป็นบิดามารดา ความเครียดในการเลี้ยงดูบุตร

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