แรงสนับสนุนทางสังคมและความรุนแรงระหว่างคู่ครอง เป็นตัวทำนายการนอนไม่หลับของสตรีไทย

Social Support and Intimate Partner Violence as Predictors of Insomnia among Thai Women

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บทคัดย่อ

การเผชิญกับความเครียดที่รุนแรงเช่นความรุนแรงระหว่างคู่ครองอาจเป็นสาเหตุของการนอนไม่หลับซึ่งส่งผลกระทบต่อสุขภาพร่างกายและจิตใจของสตรีที่ถูกกระทำ การวิเคราะห์ข้อมูลทุติยภูมินี้มีวัตถุประสงค์เพื่อ 1) ศึกษาความสัมพันธ์ของการนอนไม่หลับกับจำนวนชนิดของความรุนแรงระหว่างคู่ครอง การรับรู้ความรุนแรง และการสนับสนุนทางสังคมของสตรีไทย 2) ผลของการสนับสนุนทางสังคมซึ่งเป็นตัวแปรกำกับ ต่อความสัมพันธ์ระหว่างจำนวนชนิดของความรุนแรงระหว่างคู่ครอง การรับรู้ถึงความสาหัสของความรุนแรงระหว่างคู่ครองแต่ละชนิดซึ่งประกอบด้วยความรุนแรงทางร่างกาย เพศ และจิตใจ กับการนอนไม่หลับหลังควบคุมตัวแปรด้านอายุการศึกษาและรายได้ และ 3) ประสิทธิผลของการสนับสนุนทางสังคมจากครอบครัวหรือเพื่อนในการเป็นตัวแปรกำกับ โดยยึดแบบจำลองการเปลี่ยนผ่านของความเครียดและการเผชิญความเครียดเป็นแนวทาง

การวิจัยข้อมูลทุติยภูมินี้เป็นการศึกษาความสัมพันธ์ของตัวแปรแบบภาคตัดขวาง เครื่องมือวิจัยที่ใช้ประเมินการนอนไม่หลับ จำนวนของความรุนแรงระหว่างคู่ครอง และการสนับสนุนทางสังคม ประกอบด้วย แบบประเมินการนอนไม่หลับ แบบประเมินความรุนแรงระหว่างคู่ครอง และแบบวัดพหุมิติในการรับรู้การสนับสนุนทางสังคมจากครอบครัว กลุ่มตัวอย่างคือผู้ป่วยสตรีวัยผู้ใหญ่จำนวน 284 ราย ที่ได้เข้ารับการรักษาในโรงพยาบาลแผนกสูตินรีเวช วิเคราะห์ข้อมูลด้วยสถิติวิเคราะห์ถดถอยพหุคูณแบบเชิงชั้น ผลการศึกษาพบว่าการสนับสนุนทางสังคมไม่ได้เป็นตัวแปรกำกับระหว่างความรุนแรงและการนอนไม่หลับ การ สนับสนุนทางสังคมจากเพื่อนเป็นปัจจัยทำนายการลดลงของการนอนไม่หลับอย่างมีนัยสำคัญทางสถิติ

คำสำคัญ: การนอนไม่หลับ ความรุนแรงระหว่างคู่ครอง ความรุนแรงทางร่างกาย ความรุนแรงทางเพศ ความรุนแรงทางจิตใจ การรับรู้การสนับสนุนทางสังคม

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วันที่ได้รับ (received) 6 ธ.ค. 2563 วันที่แก้ไขสำเร็จ (revised) 8 ก.พ. 2564 วันที่ตอบรับ (accepted) 15 ก.พ. 2564

Abstract

Exposure to extreme stressors such as intimate partner violence (IPV) could lead to insomnia, affecting physical and mental health of the victims. This study aimed to examine a) the relationships between insomnia and the number of types of IPV, perceived severity of violence, and social support among Thai adult women; b) the moderating effect of social support on the relationships between the number of types of IPV, perceived severity of each type of IPV (physical violence, sexual, and psychological) and insomnia after controlling for age, education, and income; and c) which form of social support, family or friends, was more effective as a moderator. The transactional model of stress and coping guided the study. A correlational, cross-sectional design with secondary data analysis was used. The insomnia item of the Patient Health Questionnaire, Severity of Abuse against Women Scale, and Multidimensional Scale of Perceived Social Support (family scale, and family scale) were used to measure insomnia, the number of types of IPV, and social support, respectively. The study sample was 284 Thai women receiving care at obstetrics and gynecology units in a Thai hospital. Hierarchical multiple regression was used to analyze data. Results showed that friends support and the number of types of IPV experienced significantly predicted insomnia.

Keywords: Insomnia, intimate partner violence, physical violence, sexual violence, psychological violence, social support

Worldwide, insomnia is a common sleep disorder.1 Persons with insomnia report low-quality sleep patterns, troubling falling asleep and/or troubling staying asleep 2, potentially resulting in adverse health outcomes and quality of life.[1,2] Importantly, poor cognitive functions as negative consequences of insomnia can detriment women's problem solving ability and plan for safety, especially those experiencing Intimate Partner Violence (IPV).[3] Sleep disturbances commonly occur after experiencing stressful events and IPV.[4] Insomnia rates in healthy Thai adults were reported to range from 41% to 60%.[5] In Thailand, female and older adults, particular those with adverse social determinants of health such as low education and socio-economic status are likely to experience insomnia.[6] The intensity and multiplicity of type of IPV range along a continuum from lower to higher.[7] The more intense degrees of violence, such as physical violence versus financial, can negatively affect health and sleep.[7] Multiple IPV types (i.e., more than one type of violence: physical, sexual, or psychological) have also been shown to negatively impact health.[8] Thai culture is different from some other cultures in its view of IPV. Thais consider violence within the family borders as a family matter and not the right of other people outside the family to know about it.[9] As a result, the vast majority of IPV cases in Thailand go unrecognized and unreported, hidden within family borders as a private issue.[9,10]

Social support effectively moderates the relationship between stress from occupation and sleep quality; people with low social support appeared to have poorer sleep quality.[11] Also, evidence shows that social support could minimize IPV occurrence; women surrounded with supportive family and friends are less likely to experience IPV than women without support from family or friends.[9,12,13] Despite reported association between IPV and insomnia and social support and insomnia, no research has been conducted to include these three important variables (IPV, social support, and insomnia) simultaneously.

Importantly, existing studies did not use the number of IPV types experienced as a key variable when examined IPV and health outcomes. Using the number of IPV types experienced will practically enhance the quality of nursing practice in screening for IPV in today's fast-paced world. Therefore, the main purpose of this study was to examine if IPV and social support (family and friends) predicted insomnia, and which social support moderates IPV and insomnia.

The transactional model of stress and coping[14] served as the theoretical framework for the study. Perceived severity of physical, psychological, and sexual violence is represented by a primary appraisal of the stressful situation. Severity of IPV is a subjective evaluation of the violence action, depending on how women evaluate the degree of the violence action. One woman can appraise the action as non-violent, while another could evaluate it as a violent action to a high degree. Social support is one strategy used to help in coping with stressors.[14] Outcomes can be either positive or negative as a result of effective or ineffective social support. Based on Lazarus and Folkman,[14] the main categories of adaptation are emotional well-being, functional status, and health behavior aspects. In this study, the number of types of IPV experienced and the severity of IPV comprise the environmental stressor, social support is the coping strategy, and insomnia is the maladaptation.

Purpose

The purposes of this study among Thai adult women aimed to examine: a) the relationships between insomnia and the number of types of IPV (physical, sexual, and psychological violence), perceived severity of violence, and social support; b) the moderating effect of social support on the relationships between the number of types of IPV, perceived severity of each type of IPV (physical violence, sexual, and psychological) and insomnia after controlling for age, education, and income; and c) which social support form (family or friends) was more effective as a moderator.

Method

Design. A secondary data analysis with a correlational design was used. The data of the current study was taken from "Intimate Partner Violence, Emotional Support and Health Outcomes among Thai Women: A Mixed Methods Study".[9] The primary study was conducted based on a structural equation model to examine 1) predictors of IPV; 2) the association between IPV and health outcomes such as depression, quality of life, and physical symptoms; 3) the effect of social support as a moderator in the relationship between IPV and health outcomes; and 4) IPV experience among Thai women. The study used a mixed method with a correctional cross-sectional method in the quantitative part. The data were collected from 284 Thai women in 2010 from a large hospital in northeast Thailand.

Sample and setting. The sample size in this study was 284 adult women from northeast Thailand who were ≥18 years of age receiving care in the obstetrics and gynecology units and could read and write in Thai. Women receiving care from the same units with a history of psychiatric treatment (e.g., psychosis, manic-depressive disorders) were excluded from the study. The estimated sample size was calculated a priori using power analysis, G*power 3.1 software for multiple regression of eight predictors, a medium effect size of .15, alpha level of .05, and power of .80.15

Measures. Well-developed structured measures widely used in different countries including Thailand were applied in the primary study to collect quantitative data. All measures showed good psychometric properties; Due to space

limit, see details in Ross et al.'s study published in this journal in 2015. [9]

Insomnia was measured using one item from the Patient Health Questionnaire (PHQ-15),[16] which asked, "During the past 6 months, how much have you been bothered by an insomnia problem?" Likert responses were: "1 = None of the time, 2 = A little of the time, 3 = Some of the time, 4 = Most of the time, and 5 = All of the time." A higher score indicates more frequent insomnia.

Number of IPV types experienced was a new variable recoded by the research team using the Severity of Abuse against Women Scale: Physical and Sexual subscales[17], and the Psychological Maltreatment of Women Inventory[18]. The number of IPV types experienced was measured with a numeric scale from 0-3, "(0) Non-experienced IPV; (1) Experienced one type of IPV; (2) Experienced two types of IPV; and (3) Experienced three types of IPV. The women who did not experience IPV were scored in category (0); women who experienced just one type of IPV were in category (1); women who experienced physical and sexual, or sexual and psychological violence, or physical and psychological violence fell into category (2); and women who experienced all three violence types (physical, sexual, and psychological) appeared in category (3).

Perceived severity of physical violence was measured using the summed score of Severity of Abuse against Women Scale: Physical subscale.[17] The scale is 40-item; 5-point Likert scale. Higher summed scores indicate perceived worse physical violence. The reliability coefficient was .96 as reported in the primary study.[9]

Perceived severity of sexual violence was measured using the Severity of Abuse against Women Scale: Sexual subscale[17] which includes six items measured on a 4-point Likert scale. Higher scores indicate greater perceived severity of sexual violence within the relationship., The reliability coefficient was .84 as reported in the primary study.[9]

Perceived severity of psychological violence was measured using Psychological Maltreatment of Women Inventory, [18] a 14 item 5-point Likert scale, range from "1 = Never" to "5 = Very frequently". Higher summed scores indicate greater perceived psychological violence. Reliability was reported in the primary study at .90.[9]

Social support of family and friends was measured using the Multidimensional Scale of Perceived Social Support (MSPSS)-family and friends' subscales.[19] The two subscales include eight items, four items for each scale measured on a 7-point Likert scale, "1 = Very strongly disagree" to "7 = Very strongly agree". The higher summed scores indicate women perceived greater social support from family and friends. The reliability coefficients for the Family and Friends Support subscales in the primary study were .93 and .89, respectively.[9]

Covariate variables were age, education level, and income measured using a background information questionnaire.[9] Age was measured using a numeric scale. Education level was measured using three categories (. The final covariate variable was income measured also using three categories.

Human Rights Protection

The study was approved for the use of existing data[9] by the Kent State University Internal Review Board no.18-021 in January 2018. Details of the parent study could be found elsewhere. [9]

Data Analysis

Hierarchical multiple regression was used to analyze the data. A five-stage hierarchical multiple regression was conducted with insomnia as the outcome. Entering variables into the regression model was dependent on the theoretical substruction

order using the transactional model of stress and coping.15 The researchers applied 1000 bootstrap samples and 95% bias-corrected confidence intervals to make inferences about a potentially unknown regression coefficient matrix.[20]

Results

The age of participants ranged from 18 to 58 years and most participants were married (85%) and about 80% were not pregnant. Almost half of the participants (43%) had obtained a high school diploma or higher education. Approximately, half of the participants' income ranged from $165.1 to $ 659 per month (47%). Table 1 displays the correlations among the study variables. Insomnia was significantly correlated with all independent variables. The relationship between perceived severity of sexual violence and social support is the only relationship that was not significant in the correlation matrix.

Table 1 Correlations between study variables.

	Insomnia	Number of IPV types experienced	Perceived Severity of physical violence	Perceived Severity of sexual violence	Perceived Severity of psychological violence	Social support
Insomnia	1					
Number of IPV types experienced	.23***	1				
Perceived Severity of physical violence	.11*	.46***	1			
Perceived Severity of sexual violence	.17**	.54***	.56***	1		
Perceived Severity of psychological violence	.14*	.53***	.70***	.41***	1	
Social support	-.17**	-.18**	-.11*	-.01	-.15**	1

Notes: * p < .05, ** p < .01, *** p < .001.

Hierarchical multiple regression was used to analyze the data. A five-stage hierarchical multiple regression was conducted with insomnia as the outcome. Results showed that neither age, educational level, nor income significantly contributed to the regression model. Social support did not significantly moderate the effects of the number of IPV types experienced, nor perceived severity of type of violence on insomnia. The addition of interaction terms between social support and other predictors to the regression model only explained an additional 1% of the variation in insomnia; this change in R2 was not significant, p = .984. The number of IPV types experienced and social support are the only significant predictors of insomnia (Table 2). Perceived severity of each type of violence did not serve as significant predictors of insomnia, even as far as the significance of the entire model, p >.05. Table 2 displays an overview summary of the models.

Table 2 Hierarchical Regression- Moderating Effect of Social Support.

Predictors	R^2	Adjusted R^2	R^2 Change	β	b	95% CI
Step 1	.003	-.007	.003			
Age				.05	.00	[-.008, .017]
Education				.01	.01	[-.163, .176]
Income				-.04	-.05	[-.198, .108]
Step 2	.059	.045	.055**			
Number of IPV types experienced				.24**	.20	[.112, .283]
Step 3	.063	.039	.004			
Perceived severity of physical violence				-.06	.00	[-.010, .003]
Perceived severity of sexual violence				.08	.02	[-.014, .061]
Perceived severity of psychological violence				.04	.00	[-.011, .018]
Step 4	.080	.053	.017*			
Social Support				-.14*	-.01	[-.022, -.002]
Step 5	.081	.040	.001			
Social support x Number of IPV types experienced				.01	.00	[-.016, .025]
Social support x Perceived severity of physical violence				.01	.00	[-.001, .001]
Social support x Perceived severity of sexual violence				-.01	.00	[-.005, .003]
Social support x Perceived severity of psychological violence				.03	.00	[-.002, .002]

Note: *p < .05, **p < .01, β : beta, b: bootstrap coefficient.

When assessing the effectiveness of friends support vs family support, it was found that neither friends nor family support was significant. In non-interaction terms, when entering friend support and family support to the models in stage 4 as predictors, friends support was significant in predicting reduced insomnia, p = .005, while family support was not a significant predictor of reducing insomnia, p = .283. Therefore, friends support was more effective as a predictor of less insomnia compared to family support, but not as a moderator. Table 3 explains the models' summary of support from friends and family.

Table 3 Hierarchical Regression of Friends Support and Family Support.

Model Stage	R^2	Adjusted R^2	R^2 Change	Sig. F Chang	β	b	95% CI
Step 4.							
Friends support	.090	.063	.027	.005			
Friends support					-.171**	-.025	[-.043,-.007]
Step 5.							
Friends support interactions stage		.094	.053	.004	.878		
Step 4.							
Family support		.067	.039	.004	.286		
Family Support					-.065	-.010	[-.028,.008]
Step 5.							
Family support interactions stage	.073	.032	.007	.759			

Note: **p < .01, β : Beta, b: bootstrap coefficient.

Discussion

Results indicated that the number of types of IPV experienced was correlated significantly with all other study variables. The number of types of IPV experienced was also the strongest predictor of insomnia in the regression model; the more types of IPV experienced, the more trouble the participants had with insomnia. Results from the present study are in line with those in India[12] reporting that women subjected to multiple types of IPV were likely to have more health problems than those who experienced one type of IPV. The current study showed that increasing perceived severity of violence correlated with experiencing more insomnia, consistent with Pigeon and colleagues[21] who reported sleep disturbances occurred more prevalently among women experiencing IPV. The present study found that perceived severity of physical violence was the only variable correlated highly with other types of violence which supports the literature regarding the inter-correlations between the IPV types, reinforcing that the manifestation of physical symptoms is the most-reported type of IPV.[22] This could reflect the importance of screening for physical violence as a way to uncover other types of violence. Physical injuries related to physical violence often result in the victim seeking health care, which makes it the most-reported among other IPV types, and it is the starting point for reporting the other types of violence.[22] Results from the present study failed to support the moderating effect of social support (combined, friends, and family) between perception severity of IPV and insomnia. This non-significant finding may be due to cultural beliefs and women`s perceptions that they are unable to ask for help from others concerning IPV, since this means disclosing a family matter that they are bound to keep private.[9,10] Based on Ross and colleagues,[9] families of abused women view IPV as a normal family occurrence, and this family perception makes abused women feel worse, so they cease asking for help from their families. Women might also stop seeking support from friends,

perhaps due to being shamed for damaging their husbands' images. Studies in different cultures found mixed results of social support as a moderator between stress and health outcomes among various populations. Jarrin and colleagues' results[23] failed to support the moderating effect of social support between stress and sleep reactivity. Van Schalkwijk and colleagues[24] found that social support moderated between stress and sleep among Scandinavian adolescents. Conflicting results are likely generated from the use of different populations and tools measured related concepts.

Limitations and Implications

Some limitations exist in the current study. The data were collected 10 years ago. However, the statistics and nature of violence against women in the Thai culture has not dramatically changed since.[25] Therefore, we believe that using this set of data is still culturally appropriate and worthwhile. The present study represents a specific culture and geographic population in the northeast region of Thailand which limits generalizability for all Thai women. Convenience sampling could also limit generalizability of the research results. Nevertheless, the findings of this study have some clinical implications for nursing practice. For example, using a single item to assess insomnia is practical in various clinical settings including fast-paced units. Asking the woman if she has insomnia can provide the nurse an entry to assess underlying antecedents of insomnia which may include a more sensitive topic of IPV. It is common for IPV victims to be reluctant to disclose their IPV experience to others.[22] The study results can be used to support the advancement of healthcare policy in Thailand. Women who report chronic insomnia should receive an IPV screening, and if IPV is found to be a key underlying cause of insomnia, referral to appropriate counseling can be helpful.

More research is needed on insomnia and IPV in Thailand especially in other parts of the country so that results can be better generalized. It is warranted to qualitatively explore how social support can mitigate insomnia among the target population to inform future interventions. A mixed-methods study focusing on insomnia in women who have experienced IPV will be helpful. In addition to quantitative data, in-depth interviews can solicit participants' rich recommendations for helpful coping strategies to negate insomnia, potentially informing effective interventions to prevent or lessen insomnia.

Conclusion

In Thailand, insomnia, a common and complicated health problem, is understudied even though it is known to contribute to poor mental and physical health. Each insomnia case is unique and warrants a thorough investigation. Little is known about insomnia among Thai women. Results in the current study are important because they contribute to new knowledge and practice, suggesting that nurses and other healthcare providers in Thailand use the short survey of the number of types of IPV experienced to potentially identify a key underlying cause of insomnia so that insomnia can be treated effectively in the target population.

Acknowledgement:

This study was funded to Ratcheewan Ross by the Fulbright Scholar Program (Thailand & USA) and the U.S. Department of State. The researchers also would like to acknowledge the contribution of Donna Bernert and Marlene Huff in this study. Without your effort, this study would not have been possible.

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