

Social Networks and Social Support Influencing Health–Promoting Behaviors among Thai Community–Dwelling Elderly

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Abstract : This study aimed to examine whether a proposed conceptual model can explain mechanisms by which social networks and social support influence health-promoting behaviors among Thai community-dwelling elderly. Four hundred and sixty-nine elders from Nan Province, Thailand, were recruited by multi-stage random sampling. Berkman's work on social relations related to health provided the theoretical framework of this study. Structural equation modeling, using LISREL, was used to examine the causal relationships in the hypothesized model. The results suggesting the final model had a good fit with the data and could explain 74% of the variance in health-promoting behaviors. Kinship networks, through kinship support and sense of well-being, were found to have indirect effects on health-promoting behaviors. Kinship support, through a sense of well-being, also was found to have an indirect influence on health-promoting behaviors. Friendship networks and friendship support demonstrated both direct and indirect influences on health-promoting behaviors. Interestingly, friendship networks and support were found to influence support for the elderly person by family members. Elderly persons' sense of well-being demonstrated a strong positive direct effect on health-promoting practices.

The findings indicated that kinship support had a clear direct influence on the elderly person's sense of well-being, whereas friendship networks had a noticeable effect on health-promoting behaviors. To enhance the elderly person's health-promoting behaviors, nurses and multidisciplinary healthcare providers should design intervention programs to foster social relations, especially by promoting familial support and the elderly person's psychological well-being. This should also be done by facilitating friendship network activities in communities.

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Background and Significance of the Problems

Given the rapid fertility and mortality declines, in the past decades in Thailand, the percentage of aged individuals has dramatically increased from 9.5% in 2000 to 11% in 2007.^{1,2} By 2035, it is expected that Thailand will face the challenge of an aged population encompassing 25% of the total population.³ In order

to promote and enhance the well-being of the Thai aged population, the government will have to be concerned with social issues associated with aging, such as health and economic problems.

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Old age is a period of decline of both physical and mental capacities, which can result in many inevitable health problems. It is well-documented that aged people are at increasing risk of adverse changes in health, particularly regarding chronic conditions. Normally, some chronic illnesses can be prevented and controlled if people engage in health promoting lifestyles. There is clear evidence that the general health status of older people tends to improve if risk factors can be reduced.⁴ As individuals live longer, health promoting behaviors become essential, particularly with regard to maintaining physical, mental, and cognitive functions and enhancing the individual's sense of well-being.⁵

Health promotion has been identified as a key strategy to motivate people to both improve the nation's health and attain high levels of individual health. In accordance with the Millennium Development Goals (MDGs) proposed by the World Health Organization, the Thai government has put, on the national agenda, health-promoting strategies as items to improve and maintain the health of Thai people. Also, the "Healthy Thailand Project" has been put into place, for all population groups, activities to reduce behavioral health risks and major health problems,⁶ with a special emphasis on the poor, vulnerable, and elderly. However, many studies have noted that Thai elderly tend to neglect the practice of healthy behaviors. For example, a study by Chayovan and Knodel⁷ found that less than half (48%) of older people exercised and only about 31% had regular physical check-ups. "The Survey of the Elderly in Thailand" done by the National Statistical Office, in 2002 also found most elderly Thais neglected exercise and annual check-ups; only 22% actually exercised and only one-third had annual check-ups. This indicates that Thai older people rarely are nurturing their health, which contributes to the development of various health problems in later life.^{8,9}

The existing evidence shows that the health promoting behaviors of individuals are influenced by a variety of factors, both individual and contextual.^{5,10,11} For the contextual determinants of health promotion research among older adults, social integration, with respect to social networks and social support, has been associated with health promoting behaviors.¹²⁻¹⁴ Social networks and social support have been found to be linked. For example, social networks may generate support, thereby, facilitating health-related behaviors and health outcomes.^{15,16} Therefore, an integrated approach leading to an understanding of a holistic view of health behavior patterns is useful.^{11,17}

Many studies have examined, among various age groups,^{11,13,18-19} psychosocial factors related to health-promoting behaviors, but few have examined the causal relationships between social networks and social support, on the one hand, and health promoting lifestyles among the elderly population, on the other. Although the elderly population is an ideal target group for health-promoting strategies in Thailand, health promotion research on older adults mainly has been focused on those suffering chronic illnesses. Despite their vulnerability to various health problems, the number of studies of elderly living in the community remains limited. In particular, the existence and role of any causal mechanisms explaining the direct and indirect effects of social relations, on health-promoting behaviors among Thai community-dwelling elderly, has been studied to a limited extent. For reasons explained in the next section of this paper, Berkman's framework of Social Relations in Health^{15,20} was proposed as a model, which could fill this gap. This study aimed to examine whether the proposed conceptual model can explain the mechanisms by which social networks and social support influence health-promoting behaviors among the Thai community-dwelling elderly.

Conceptual Framework and Related Literature

Berkman's conceptual model on social relations in health was used to guide this study.^{15, 20} Berkman and colleagues proposed a cascading causal process that includes dynamically linked macro social structural conditions to individual processes, by which social relationships influence health. Berkman's conceptual model allocates aspects of social integration, such as social networks and social support that influence health outcomes, to individual pathways defined in terms of health behaviors, psychological factors, and physiological factors.^{15, 20} Social networks generally provide opportunities for social support, and the nature of these relationship may have significant and distinct consequences for health-related behaviors.¹⁹

Health promotion behavior is considered as a behavioral pathway of individuals which is evidently proximate with health outcomes. The antecedent social factors influencing individual behaviors are social contexts, including social networks and social support, that can be seen as having a strong effect on the health-related behaviors and health outcomes of individuals who live within such social contexts.^{15, 17} Moreover, the quality of social relations, within a particular cultural context, has generally been found to have an impact on the sense of well-being of aging individuals.²¹⁻²³ Sense of well-being is documented as one of the psychological pathways that relates to health promotion practice.^{15, 20} Social support may be a mediating factor on the relationship between networks and health-promoting behaviors, as well as social support having an effect on health-promoting behaviors, which may be mediated through sense of well-being of the elderly.

Structural networks in this study were classified, according to Lubben's social network model,²⁴ into two main types: kinship networks (spouse, children, grandchildren, sons/daughters-in-law, siblings, and

relatives) and friendship networks (friends and intimate neighbors). In the conceptual model used in this study, kinship networks and friendship networks were seen to separately generate kinship and friendship support. Moreover, a number of studies have suggested that social networks are associated with a sense of well-being²⁵ and health promotion behaviors.^{19, 26-27}

Social support can be seen as both tangible (informational and instrumental support) and intangible support (emotional support) that the older person receives from network members. It is well documented that social supports are the functional aspect of social relationships and act as mediating factors between social networks and health.^{17, 28} Models used to evaluate the effects of social support on health have identified several mechanisms through which these effects may occur.²⁸⁻²⁹ However, these effects are also mediated by psychological processes and health-related behaviors.³⁰ Regarding the direct effects, a substantial body of research has indicated that social support buffers the negative effects of life events and depression,²⁸⁻²⁹ and also contributes to promoting healthy behaviors.^{5, 29} Moreover, within the Thai collectivistic context, support provided by friends and neighbors has been found to be influential and supplemental to support provided by kin.³¹⁻³² Therefore, it is expected that kinship and friendship support would be associated with each other, with the sense of well-being, and with health promotion behaviors.

Furthermore, sense of well-being is considered as an individual factor associated with health behaviors and health outcomes.^{15, 20} Sense of well-being has an indirect influence on health conditions through health promotion behaviors.³³ This study focused on sense of well-being, in terms of psychological well-being³⁴ and life satisfaction.³⁵ It is suggested that sense of well-being is positively associated with health-promoting behaviors.^{27-28, 33}

Various prior studies in health-promoting behaviors have generally focused on the simple relationship between independent and dependent variables or between predictor factors and dependent variables.^{13, 18} However, Jo and colleagues¹¹ have suggested that an investigation of the consecutive relationship between independent variables is needed to better establish a holistic view of the subject. In spite of the complex nature of health-related behaviors

in their relationship to both individuals and contextual environments,³⁶ there is inconsistency in the theories relative to health-promoting behavior models. This study adopts Berkman's work, as a theoretical framework,^{15, 20} to explore the consecutive relationship among social relation factors to health-promoting behaviors of Thai community-dwelling elderly. The conceptual model is shown in **Figure 1**.

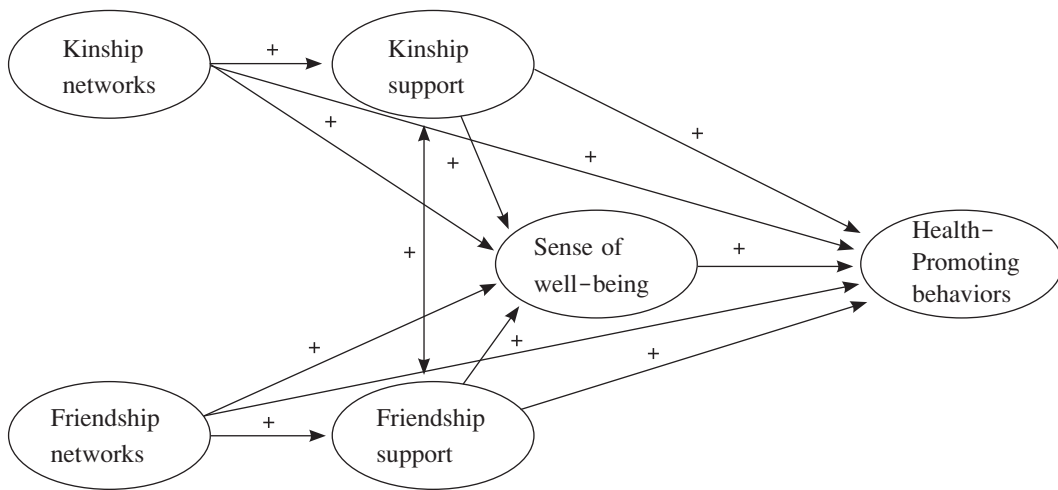


Figure 1 A conceptual model of social relations and health-promoting behaviors

The hypotheses of this study were as follows: 1) kinship networks have a positive direct effect on kinship support, sense of well-being, and health-promoting behaviors, and a positive indirect effect on sense of well-being through kinship support, as well as a positive indirect effect on health-promoting behaviors through kinship support and sense of well-being; 2) friendship networks have a positive direct effect on friendship support, sense of well-being, and health promotion behaviors, and a positive indirect effect on kinship support through friendship support,

sense of well-being through kinship support, as well as a positive indirect effect on health-promoting behaviors through friendship support and sense of well-being; 3) kinship and friendship support have a positive direct effect on each other, on sense of well-being and health-promoting behaviors, as well as a positive indirect effect on health-promoting behaviors through sense of well-being; and 4) sense of well-being has a positive direct effect on health-promoting behaviors.

Methods

Design and Setting

A cross-sectional, descriptive study design was used in this study. The causal relationship between social networks, social support, and health-promoting behaviors of Thai community-dwelling elderly was examined. The subjects were recruited from Nan Province in Northern Thailand, a province that like much of Thailand is facing a dramatic increase in the aging population.

Sample and Procedures

Calculating from the entire aging population of the province (67,513 people), the sample size was derived using a formula by Lemeshow and colleagues.³⁷ A total of 469 elders were selected to participate in the survey. Multi-stage random sampling was used. All subjects met the following inclusion criteria: 1) being an older person who had resided in the community for one year or more; 2) being aged 60 years or older; 3) not suffering severe disabilities or severe dementia; 4) being able to understand and speak Thai; and 5) being willing to participate in the study.

Prior to data collection, the research protocol was submitted to and approved by the Institutional Review Board (IRB) of the researcher's academic institution, at the time of this study. In order to obtain access to potential subjects, the purposes of the study and procedures of data collection were described to the Nan Provincial Chief Medical Officer. Data were gathered from May to July 2007. Face-to-face interviews were conducted in each respondent's home by trained interviewers. Before informed consent was signed, respondents were informed of the overall purposes and protocols of the study, and of the time required to complete

questionnaires. Respondents were assured that the confidentiality of their information was secure, that they could refuse to answer any question, and that they could withdraw from the study at any time. Respondents were also informed of any inconveniences that might arise through their participation in the study.

Measures

Health-promoting Behaviors: The Health-Promoting Behaviors Measuring Instrument (HPBMI), developed by Yensuchit,³⁸ was modified to measure health-promoting behavior among Thai elderly. HPBMI was originally a 52 item 4-point Likert-type scale that consisted of seven subscales. The alpha Cronbach reliability coefficients, of the seven subscales, ranged between .71 and .94.³⁸ Since the HPBMI originally was developed from a group of elderly living in an urban area (Bangkok) and because of large differences in life styles and living environments between Bangkok and the study area (Nan Province), the scale required modification by the researcher. The modified health-promoting behavior scale used in this study consisted of 36 items in seven subscales. This captured two main dimensions: promoting health, and preventing disease and injury. Promoting health was measured by four subscales: self-care management, physical activity, healthy eating, and positive spirituality. Preventing disease and injury consisted of three subscales: preventing injuries, home sanitation management, and stress management. The responses on this inventory ranged from 1 (never) to 4 (routinely). A high score indicated that health promoting behavior was practiced more frequently. The internal consistency reliability coefficients ranged from 0.70 to 0.93 for these seven subscales. The alpha coefficient of the entire health-promoting behavior scale, in this study, was 0.94. The alpha coefficients of the two main subscales (promoting health and preventing disease and injury) were 0.92 and 0.90, respectively.

Social Networks: The abbreviated version of the Lubben Social Network Scale (LSNS-6), developed by Lubben and colleagues,²⁴ was used for measuring social ties and intimacy between individuals and kin (people who are related either by birth or marriage) and non-kin or friends (people who are related either as friends or neighbors). The LSNS-6 has an alpha coefficient of 0.78 and is composed of six items.^{24, 39} Three items are self-reported measures of: (a) active network size by regularly contacted people; (b) intimates; and (c) perceived confidants.^{19, 24} The elderly respondents were asked to assess kin and non-kin networks separately. Each item was scored in a range through 0 (none), 1 (one), 2 (two), 3 (three or four), 4 (five thru eight), to 5 (nine or more).²⁴ The Cronbach's alpha coefficient of this scale, in this study was 0.81, and the alpha coefficients of the two subscales of kinship and friendship networks were 0.79 and 0.82, respectively.

Social support: The Social Support Scale was modified from the Perceived Support Scale, developed by Krause and Markides⁴⁰ to measure the receipt of three kinds of support (informational, emotional, and instrumental support) from kin and friends. The social support scale used in this study consisted of 11 items (informational support, 2 items, emotional support, 4 items, and instrumental support, 5 items), and measured both kinship support and friendship support separately. Study participants were asked to indicate, on a 4-point scale rated from 1 (never) to 4 (very often), the support they received. A high score indicated that support was frequently received from network members. The original perceived support scale has high internal consistency with an alpha coefficient of 0.87.⁴⁰ The Cronbach's alpha value of social support scale, in this study, was 0.90 and the alpha coefficients of the two subscales of kinship and friendship support were 0.92 and 0.84, respectively.

Sense of well-being: Two constructs of sense of well-being were examined. First, life satisfaction was investigated using a single question, "Overall,

how satisfied are you with your life now?" The score ranged from 1 (very dissatisfied) to 4 (very satisfied).³⁵ Second, the Thai Psychological Well-being Scale (TPWBS), developed by Ingersoll-Dayton and colleagues,³⁴ was used as a culturally sensitive measure to examine two indicators of Thai elderly well-being: interpersonal psychological well-being and intrapersonal psychological well-being. The TPWBS has five subscales: harmony, interdependence, respect, acceptance/calmness, and enjoyment. It consists of 15 items, each of which has values ranging from 1 (not at all true) to 4 (very true).³⁴ A high score indicated a greater level of psychological well-being. All subscales have adequate reliability and validity with the Cronbach's alpha coefficients of interpersonal psychological well-being and intrapersonal psychological well-being of 0.81 and 0.79, respectively.⁴³ The alpha coefficients of these two subscales, in this study, were 0.94 and 0.88, respectively, and the Cronbach's alpha score of the entire TPWBS was 0.94.

Data Analysis

Structural equation modeling (SEM) through the Linear Structural Relationship Program (LISREL) was used to examine the causal relationships in the hypothesized model. The use of structural modeling may be thought of as an attempt to represent explicitly both the direct influence of one variable on another and the indirect influence that may occur through a third variable. An advantage of structural modeling is that it allows separation of the estimates of direct and indirect effects.⁴¹⁻⁴² All the study variables' scores, in this study, showed normal distribution, as assessed by skewness and kurtosis. Also, the statistical assumptions of the study were in accordance with the criteria of SEM, as normality, linearity and multicollinearity testing of data were not violated.

The analyses with structural equation modeling consisted of the following steps: 1) PRE-processor for LISREL (PRELIS) procedure was performed for data preparation in a covariance matrix form; 2) the measurement models were tested for construct validity by confirmatory factor analysis (CFA) using the covariance matrix of each variable's component as data; and 3) each measurement model was joined together to make a construct model and to be tested as a causal model. The full model was tested for adequacy and then modifications for better fit and parsimony were carried out. The final model was used to test the hypotheses.

Results

Socio-demographic characteristics of the participants

The ages of the 469 participants ranged from 60 to 103 years, with a mean of 70 years (SD = 7.5). More than half (57%) were female, and about 59%

were married. In regards to education, most had completed primary school (70%). The majority (61%) were not working. In the case of those who were still working, most (67%) worked in the agricultural sector. Regarding economic status, about half (53%) could be classified as being in poverty, having annual incomes under the poverty line (10,000 baht – US\$ 300 a year). Most of the elderly respondents reported their health as either good (44%) or fair (43%).

The theoretical model assessment and modification

Relationship among variables in the hypothesized model: Using Pearson's correlation coefficient, the correlations between selected variables were analyzed and are shown in Table 1. All variables showed significant positive relationships at the moderate to strong level.

Structural analysis of social factors related to health-promoting behavior: In the principal analysis, four measurement models (kinship networks, friendship

Table 1 Correlation matrix of study variables

Variable	KNW	FNW	KSP	FSP	SOW	HPB
KNW	1.000					
FNW	0.479***	1.000				
KSP	0.397***	0.372***	1.000			
FSP	0.276***	0.474***	0.591***	1.000		
SOW	0.357***	0.382***	0.519***	0.453***	1.000	
HPB	0.378***	0.566***	0.563***	0.553***	0.695***	1.000

Note: *** $p < 0.001$, KNW = Kinship Networks, FNW = Friendship Networks, KSP = Kinship Support, FSP = Friendship Support, SOW = Sense of Well-Being, HPB = Health-Promoting Behaviors

networks, sense of well-being, and health-promoting behaviors) were examined. The findings indicated that all measurement models had an absolutely acceptable overall model fit to the sample data. All loading factors were substantial and demonstrated significant t value.

Structural Equation Modeling (SEM) was employed to test the hypothesized full model. The overall model fit of the hypothesized structural model analysis showed inadequate fit to the sample data (chi-square (χ^2) = 146.48, df = 42, $p < 0.001$, GFI = 0.95, AGFI = 0.91, CFI = 0.98, NFI = 0.97,

RMSEA = 0.07, $\chi^2/df = 3.41$). Then, the hypothesized model was modified by freeing two parameters; modification indices together with theoretical and empirical reasoning were used to guide the process of modifying the model.

Initially, the covariance parameter between psychological well-being and preventing disease and injury practices was freed for three reasons. First, the modification index and the standardized residuals between them were 18.26 and 5.04 respectively, indicating the need to let their error covariance correlate for better model fit. Second, empirical evidence, especially in the context of Thailand, has documented that psychological well-being among the elderly is important because it is closely related to social ties, reciprocity, and social relationships,³⁴ which can motivate the elderly individual to practice, both in health promotion and disease prevention,²⁷ positive health-related behaviors. Moreover, a number of studies have stated that individuals who have high psychological well-being tend to practice healthy behaviors for the purpose of preventing diseases in daily life.^{27, 43} Third, on the related theoretical evidence, Green and Kreuter⁴⁴ have explained that predisposing factors, such as intra-individual determinants identified in terms of attitude-behavior models (e.g. individual attitudes, expectations, and self-motivations), are associated with health behaviors. This means that intra-individual emotions with respect to emotional and psychological aspects, subsequently, can influence individual health-related behaviors.

Freeing the covariance parameter between kinship support and preventing disease and injury practices is justifiable for the following three reasons. First, modification indices and the standardized residuals between kinship support and preventing disease and injury were 5.26 and 3.21, which indicated they should be freed. Second, a number of studies have documented that family or kinship support is significantly associated with the health of elderly parents by facilitating the engagement of elders in good health-related behaviors, such as healthy eating and disease-prevention practices.^{27, 32, 45} Third, the theoretical evidence of social control theory posits that family relationships promote healthy behaviors directly through informal support leading to promoting behavior conducive to healthiness.⁴⁶ Also, the health promotion model proposed by Pender⁵ shows that interpersonal influence, such as affect and social support, leads to commitment to a plan of action and subsequent health-promoting behaviors.

The modified model was fitted reasonably with the data. Although the chi-square statistic was significant ($\chi^2 = 120.17$, $df = 40$, $p < .001$), as it was quite sensitive to the large sample size,⁴¹⁻⁴² other fit indices suggested a good fit (e.g. GFI = 0.96, AGFI = 0.92, CFI = 0.98, NFI = 0.97, RMSEA = 0.06, $\chi^2/df = 3.00$).⁴⁷ A summary model of social relations linking to health-promoting behaviors is shown in **Figure 2**.

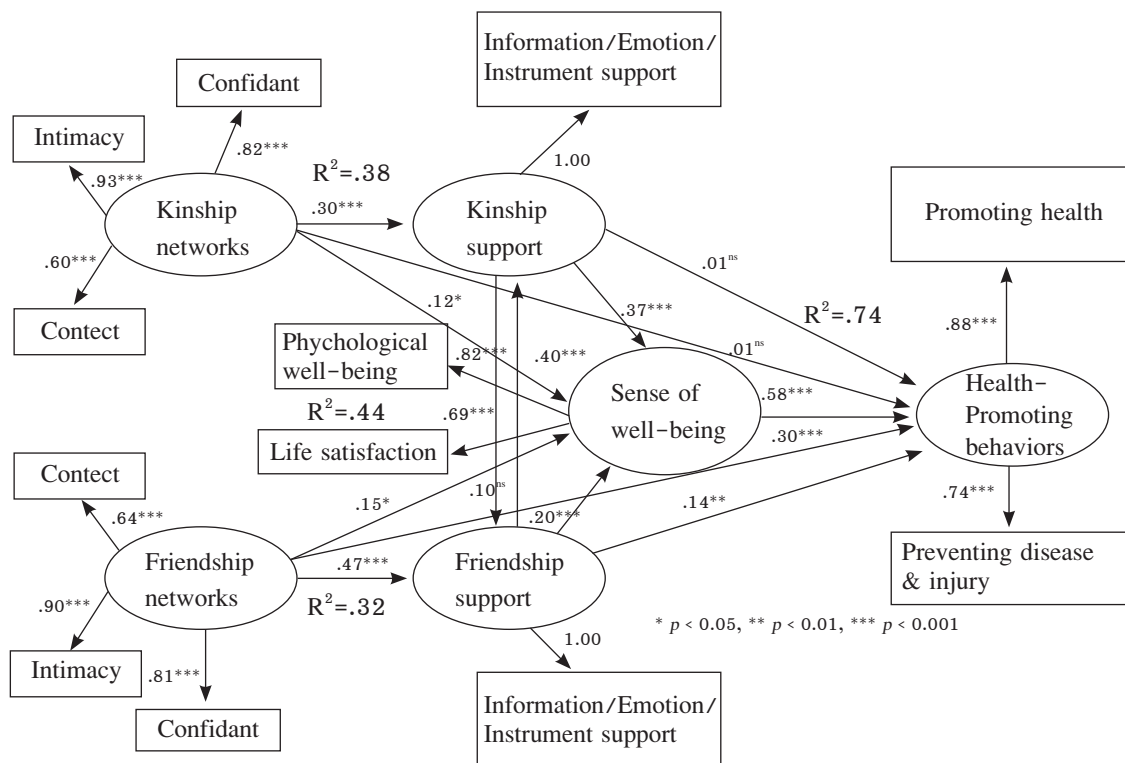


Figure 2 A summary diagram of a causal relationship of social relations influencing health-promoting behaviors among Thai community-dwelling elderly

The analysis of causal relationships involving psychosocial factors and health-promoting behaviors

with respect to direct effect, indirect effect, and total effect is illustrated in **Table 2**.

Table 2 Direct, indirect and total effect of influencing variables on affected variable in the health-promoting behavior causal model

Causal Variables	Affected Variables											
	Kinship support			Friendship Support			Sense of Well-Being Behavior			Health-Promoting Behavior		
	TE	DE	IE	TE	DE	IE	TE	DE	IE	TE	DE	IE
Kinship networks	.31***	.30***	.01	.03	-	.03	.24***	.12*	.12***	.15**	.01	.14**
Friendship networks	.20***	-	.20***	.49***	.47***	.02	.32***	.15*	.17***	.55***	.30***	.25***
Kinship support	.11	.10	.01	.41***	.37***	.04	.26***	.01	.25***			
Friendship support	.42***	.40***	.02	.36***	.16*	.20***	.35***	.14***	.21***			
Sense of well-being	.58***	.58***	-									
Structural Equation Fit	$R^2 = .38$			$R^2 = .32$			$R^2 = .44$			$R^2 = .74$		
	$\chi^2 = 120.17$, $df=40$, $p > .001$, $GFI = 0.96$, $AGFI = 0.92$, $CFI = 0.98$, $NFI = 0.97$, $RMSEA = 0.06$											

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$;

TE = Total effect; DE = Direct Effect; IE = Indirect Effect

Based on Berkman's framework, the final structural model was verified to achieve a good fit with the empirical data. It could explain 38% of variance in kinship support, 32% of variance in friendship support, 44% of variance in sense of well-being, and 74% of variance in health-promoting behaviors. Most of the research hypotheses were supported by the sample data, except the direct effect of kinship support on friendship support, as well as on health-promoting behaviors. The results clearly revealed that kinship support had no direct effect on health-promoting practices of the elderly ($\beta = 0.01, p > .05$), but had a positive indirect influence through the elderly's sense of well-being ($\beta = 0.25, p < .001$). Similarly, kinship networks had a significant indirect effect on the elderly's health-promoting practices, through various supports and the sense of well-being of the elderly ($\beta = 0.14, p < .01$). Interestingly, friendship support directly influenced support for the elderly by kin ($\beta = 0.40, p < .001$) and friendship networks had an indirect effect on kinship support for the elderly, through friendship support ($\beta = 0.20, p < .001$). The findings also showed that friendship networks had both significant positive direct and indirect effects on the elderly's sense of well-being ($\beta = 0.15, p < .05$ and $\beta = 0.17, p < .001$, respectively), as well as both positive direct and indirect effects on health-promoting behavior ($\beta = 0.30, p < .001$ and $\beta = 0.25, p < .001$, respectively). Moreover, sense of well-being of the elderly was a significant variable that has a strong, direct influence on health-promoting practices ($\beta = 0.58, p < .001$) (see **Table 2**). Therefore, social support and sense of well-being of the elderly, as causal mechanisms, are seen as acting through both a positive direct effect and the mediated effects on the relationship between kinship and friendship networks, and health-promoting behaviors of the elderly. It should be noted that kinship support is important for the elderly person's sense of well-being, which plays a role in facilitating subsequent

health-promoting behaviors. Whereas, friendship networks and support play a significant role in promoting health-promoting practices in the community.

Discussion

The covariance structural analysis of the causal relationship of social relations and health-promoting behaviors of the elderly showed that both kinship and friendship networks have positive direct effects on supports to the elderly. This supports the hypotheses of this study. The level of activity of the networks was indicated by things, such as the size of the active network and the number of confidants available, the regularity of contact through the network, and the availability of intimate contacts who could be called on for help. The more active the networks experienced, by the elderly, the more support received in terms of informational, emotional, and instrumental support. Various studies have noted that social networks usually generate support.^{14-15, 32}

However, it was found that the relationship between kinship networks and support is not as strong as that of friendship networks. This seems to indicate that the existence of large kinship networks does not point toward highly positive results with strong support. A possible reason for this particular finding may be that, because of high fertility in the past, on average, most of the elderly respondents had high numbers of children (including sons/daughters-in-law), grandchildren, and siblings. These kin had usually migrated to other places for various reasons, such as work, marriage, or study,⁴⁸ which may have affected the provision of some kinds of support, such as informational or instrumental support. In contrast, friends and neighbors were usually dwelling near the elders within the community, so the more friends the elders had, the more support they tended to receive.

Interestingly, the findings of this study indicated that friendship networks and support have an influence on kinship support. This means that

friends and neighbors, in the community, have an influence that is associated with elderly support or care given by family members. A possible explanation is contextual to Thailand and one that applies particularly to Nan Province. Nan Province is well-recognized as having strong social practices within the community.⁴⁹ In cases where family ties are non-existent or tenuous, with respect to elderly care, or where elders have no or very few kin to count on, friends and neighbors may provide support by acting as the elderly person's informal support network.^{31, 50} In Thailand, several studies have documented that support for older adults does not only come from family members, but also from friends and neighbors.³¹⁻³² Perhaps this may be the outcome of the typical cultural and traditional values of interdependence, reciprocity, harmony, sympathy, which are linked to the social norms and values of Buddhism.^{31-32, 34, 51} On the other hand, in regards to mutual support within a community, friends and neighbors also reflect the quality of support by children or family members and they urge support by children or family members via informal social control. For example, if children neglect to support their elderly parents or to provide inadequate support and care, they will be held responsible and regarded as culpable by their neighbors. Thus, it is very rarely found that Thai older people are abandoned or have no support⁵² because they are at least supported by friends or neighbors within community.

However, the findings of this study failed to support a direct effect of both kinship networks and kinship support on health-promoting behaviors. Kinship networks and support did not directly affect the elderly health-promoting practices, but indirectly influenced them through sense of well-being of the elderly. The findings also indicated that kinship support directly affects the elderly person's sense of well-being. The reason might be that kinship or family support is the main resource for older people worldwide, and especially in Thailand.^{32, 45} Perhaps familial support

has a greater effect on the elderly individual's sense of well-being than non-kin support because kinship support is recognized to be involuntary and spurred by a sense of obligation and filial piety, while friendship support is considered to be voluntary. The reasons that elderly parents are more reliant on family support may be related to the social norms of: 1) legal relationships; 2) traditional filial obligation; and 3) reciprocal exchange. Because of these cultural and legal norms, the elderly person's expectations of receiving support or care from family members, as a reciprocal repayment in later life, may be more deeply embedded than other expectations of support. Chen and Silverstein²¹ stated that the beneficial effects of receiving support from children, acting in accordance with traditional filial values on parents' morale, are underlined by the elderly person's greater satisfaction with their children's support. Therefore, the quality of familial support is important for the elderly person's sense of well-being and in persuading the elders to engage in health-promoting lifestyles, fully mediated through the elderly person's positive sentiments toward their children or relatives' provision of support.

Many existing studies have documented that family support positively relates to health-related behaviors among older people,^{5, 19} but most have focused upon the simple relationship between kinship support and health-related behaviors. The current study expands this focus, in a way that is relevant and culturally sensitive to its Thai context, to understanding the mechanisms through which social support influences engagement in health promotion practices among the elderly, through the mediating variable of the psychological process of the sense of well-being. Also, it was found that sense of well-being distinctly influenced health-promoting participation among the elderly. This means that the more the elderly experience psychological well-being and satisfaction with life, the greater their practice of health promotion and disease prevention, subsequently leading to

healthy aging. One explanation for this particular finding may be that the psychological aspect is quite important for older adults,⁵³ particularly in an interdependent society.^{32, 34} Perhaps older people's feelings of happiness and satisfaction with social network support may encourage them to continuously participate in health promotion practices for maintaining their own health. This finding supports a previous study on health promotion behaviors, among Thai community-dwelling elders, which suggested that maintaining good psychological processes and enjoyment is the major factor in engaging in the health-promoting behaviors necessary to achieve healthy aging.²⁷

In addition, friendship networks and support evidently influenced the elderly person's health-promoting practices both directly and indirectly. Friendship networks seem to promote and enhance engagement in health promotion practices more than kinship networks, at least in a rural setting, such as Nan province. Many studies have stated that kinship networks and friendship networks are associated, in a different way, with elderly health.^{19, 26} Kinship networks positively affect mostly chronic disease-related health cases or specific disease-management activities,^{19, 26, 45} whereas friendship networks typically influence lifestyle-related health promoting activities.^{19, 26} This finding supports work done by Gallant and colleagues²⁶ who indicated that friends play a much larger role in the provision of emotional and information support, in particular intimate friends or friends who are suffering similar health conditions. There is the possibility, in social engagement within the community, that friendship networks may potentially influence health behaviors by giving opportunities for knowledge,

motivation, encouragement, companionship, and recreation, which, in turn, facilitate the practice of healthy behaviors with positive consequences for health outcomes.

Conclusions

The causal model of social relationship and health-promoting behaviors among the Thai community-dwelling elderly in the present study was based on Berkman's work on social relations related to health, which proposes that social integration can affect individual health. A significant effect of kinship networks and support on the elderly person's health-promoting behaviors was partially supported. The major findings indicated that kinship support had a significantly direct influence on the elderly person's sense of well-being, whereas friendship networks had a prominent influence on health-promoting behaviors. Moreover, the elderly person's sense of well-being had a powerful influence on health-promoting behaviors. The findings of this study markedly expand the knowledge base derived from Berkman's framework, appropriately and consistently taking into account the collectivistic or interdependent nature of Thai society. Four main issues are discussed. First, kinship networks and support indirectly influenced health-promotion behaviors, through the elderly person's sense of well-being. Second, friendship networks and support had both direct and indirect influences on health-promoting behaviors. Third, friendships influenced elderly support or care by family members. Fourth, psychological processes, such as the sense of well-being in the elderly, played an important role as antecedents to healthy behaviors.

Recommendations for Nursing Practice and Future Study

These findings challenge policy makers to provide direction and strategies in the development of community-based nursing practice. Elderly health promotion programs that maximize the utility of the family and community should be synergistic. Social integration of older people is also a top priority. The successful integration of older people into families and communities will provide benefits in promoting elderly individual, family, community, and national development. In particular, social participation in community activities, with friends or neighbors, should be continuously promoted and opportunities should be given to older people to strengthen their health promoting behaviors. The results of this investigation suggested that policies attempting to shift the responsibility for elderly health promotion from private to public sources should take into account psychological benefits that the elderly may derive from exchanging social support with children and relatives. Thus, since a positive emotional sense of well-being markedly improves participation in health-promoting behaviors, it would be worthwhile to incorporate, in health promotion programs for the community-dwelling elderly in Thailand, both kinship and friendship network supports. Health education programs for family and friends have been recommended as beneficial for health promotion. Nurses should design intervention programs to facilitate and increase social relationships between older people, family members, and friends. In addition, as older people are the ones who need to adopt health-promoting behaviors, their needs and attitudes related to psychological well-being should be addressed to ensure the success of the programs.

However, this study has some limitations. It is a cross-sectional design and this may decrease the robustness of the causality between social factors and health-promoting behaviors. Thus, for further

study, a longitudinal design would be a legitimate method of elucidating the causal relations among the variables in the model. Based on Berkman's framework, such a study could also find the mechanisms with respect to direct, indirect, and mediated effects among the psychosocial components within the model. Furthermore, the complicated mechanisms on a macro level, with respect to culture, politics, and social change, should be included in a longitudinal study in the future. Despite these limitations, the current study contributes to the expansion and coherence of the body of knowledge on the linkages between social relations and health-promoting behaviors in the Thai context.

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เครือข่ายและการเกื้อหนุนทางสังคมที่มีอิทธิพลต่อพฤติกรรมส่งเสริมสุขภาพของผู้สูงอายุไทยในชุมชน

กัตติกา ธนะชว่าง

บทคัดย่อ: การวิจัยนี้มีวัตถุประสงค์เพื่อทดสอบโมเดลเชิงสาเหตุในกลไกความสัมพันธ์ของเครือข่ายและการเกื้อหนุนทางสังคมที่มีอิทธิพลต่อพฤติกรรมส่งเสริมสุขภาพของผู้สูงอายุไทยในชุมชน กลุ่มตัวอย่างคือ ผู้สูงอายุในจังหวัดน่าน จำนวน 469 คน เลือกด้วยวิธีสุ่มแบบหลายขั้นตอน การศึกษานี้ใช้กรอบแนวคิดเกี่ยวกับความสัมพันธ์ในสังคมที่มีผลต่อสุขภาพของเบิร์กแมน วิเคราะห์ข้อมูลโดยใช้โปรแกรมลิสเรล 8.72 ผลการทดสอบโมเดลพบว่า แบบจำลองเชิงสาเหตุมีความสอดคล้องกับข้อมูลเชิงประจักษ์ สามารถอธิบายพฤติกรรมส่งเสริมสุขภาพของผู้สูงอายุได้ร้อยละ 74 เครือข่ายครอบครัวมีอิทธิพลทางอ้อมต่อพฤติกรรมส่งเสริมสุขภาพผ่านการเกื้อหนุนดูแล และความผาสุกทางใจของผู้สูงอายุ เช่นเดียวกับการเกื้อหนุนโดยครอบครัวมีอิทธิพลทางอ้อมต่อพฤติกรรมส่งเสริมสุขภาพผ่านความผาสุกทางใจของผู้สูงอายุ เครือข่ายและการเกื้อหนุนจากเพื่อนมีอิทธิพลทั้งทางตรงและทางอ้อมต่อพฤติกรรมส่งเสริมสุขภาพของผู้สูงอายุ ข้อค้นพบที่น่าสนใจคือ เครือข่ายและการเกื้อหนุนของเพื่อนมีอิทธิพลต่อการเกื้อหนุนดูแลผู้สูงอายุโดยครอบครัว นอกจากนี้ความผาสุกทางใจของผู้สูงอายุมีอิทธิพลทางบวกโดยตรงอย่างมากต่อพฤติกรรมส่งเสริมสุขภาพ

ผลการศึกษาชี้ชัดว่า การเกื้อหนุนโดยครอบครัวมีอิทธิพลทางบวกโดยตรงต่อความผาสุกทางใจของผู้สูงอายุ ในขณะที่เครือข่ายและการเกื้อหนุนโดยเพื่อนมีอิทธิพลอย่างมากต่อพฤติกรรมส่งเสริมสุขภาพของผู้สูงอายุ ดังนั้นการที่จะส่งเสริมพฤติกรรมส่งเสริมสุขภาพของผู้สูงอายุ พยาบาล และผู้ปฏิบัติงานสหสาขาวิชาชีพ ด้านสุขภาพ ควรกำหนดแนวทางกลยุทธ์ในการส่งเสริมความสัมพันธ์การช่วยเหลือเกื้อกูลในสังคม โดยเฉพาะส่งเสริมการเกื้อหนุนโดยครอบครัว ความผาสุกทางใจของผู้สูงอายุ และสนับสนุนกิจกรรมที่เอื้อต่อการสร้างเครือข่ายเพื่อนในชุมชน

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