PSYCHOSOCIAL DETERMINANTS OF SUICIDAL IDEATION AMONG THAI WOMEN

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Abstract

Background: According to a Thai Public Health Ministry spokesman, more than 300 Thai individuals commit complete suicide per month, making Thailand the nation with the third-most suicides in the world. Despite the high rates of suicidal ideation in Thai adult women, the predictors associated with suicidal ideation rates are still unknown. Thus, the purpose of this study was to examine those predictors, specifically the extent to which quality of life, intimate partner violence, social support, employment status, partnership status, and parenthood status predict suicidal ideation in this population.

Theoretical framework: The Interpersonal Theory of Suicidal Behaviors guided the study. Suicidal ideation is defined as a desire to die or a desire to engage in lethal behaviors.

Methods: This is a secondary analysis study using data obtained from a previous convergent mixed method study. The data were collected using self-report instruments. The present study used a cross-sectional correlational design. All participants in the parent study (N=284), who were recruited from a large hospital in Northeast Thailand, were included in the present study.

Results: The overall prevalence of suicidal ideation was 8% (22 participants out of 284 had SI). Logistic regression analyses indicated that the included predictors (Quality of life, perceived social support, intimate partner violence, partnership status, employment status, and parenthood status) as set were statistically related with suicidal ideation. However, the bivariate logistic regression analyses showed that quality of life was the only predictor in the model that negatively affected suicidal ideation with an Odds Ratio (OR) of .91.
Discussion and Conclusion: The current study indicated that quality of life was uniquely associated with suicidal ideation in Thai women. High levels of quality of life correlated with lower odds of reporting suicidal ideation. The findings partially support previous studies and the Interpersonal Theory of Suicide Behavior. Limitations include the use of cross-sectional data, use of subjective measures to assess the study variables, and use of a single item to assess the study outcome.

Implications and Future Research: The findings of the current study can serve as an empirical basis for planning and implementing suicidal ideation prevention programs and/or establishing or revising social policies for the target population. The study findings offer important insights for future research, specifically research that focuses on causation and intervention of suicidal ideations.
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CHAPTER 1

Introduction

Background

Suicide-related behaviors are significant public health problems, and these behaviors have significantly increased worldwide in recent decades (Vijayakumar, 2015). Suicide-related behaviors are complex and multi-dimensional events with several behavioral characteristics including a range of self-harming thoughts and acts with the intent of death (Gvion & Apter, 2017). The term suicide-related behaviors can be viewed as a continuum of behaviors, starting with suicidal ideation that develops to non-lethal suicide attempt and/or completed suicide (Kumar, 2014). Suicidal ideation is defined as thoughts and ideas about committing suicide or a desire to terminate one’s life without the suicidal act (Gvion & Apter, 2017). Non-lethal suicidal attempt is described as a self-initiated, potentially injurious behavior accompanied by presence of intent to die, but without a fatal outcome (Gvion & Apter, 2017). However, the term-completed suicide, which is also called lethal suicidal attempts, applies to cases in which a suicide attempt causes death (Gvion & Apter, 2017). All suicide-related behaviors are self-initiated with the presence of intent to die. In the absence of intent to die, the term self-harm is used instead (Van Ordan, Witte, Cukrowicz, Braithwaite, & Selby, 2011).

According to a Thai Public Health Ministry spokesman, more than 300 Thai individuals commit completed suicide per month, which equates to about 4,000 annually, making Thailand the nation with the third-most suicides in the world (Banks, 2016). Research indicates that men are more likely than women to commit lethal suicide worldwide; nevertheless, women are more likely than men to report suicidal ideation and to be hospitalized for suicide attempts, both in Asian and Western countries (Devries et al., 2011; Vijayakumar, 2015). In Thailand, life-time
suicidal ideation of women is about 22%, higher than women from other low or middle income countries such as Ethiopia, Namibia, Samoa, Serbia, and Tanzania (Devries, 2011). Much of the existing research has focused on completed suicides or suicide attempts (Hiswåls, et al., 2015). But experience of suicidal ideation has been found to increase the probability of committing lethal suicide by 30%; despite this staggering statistic, it has received limited attention (Hiswåls, et al., 2015; Nock et al., 2008). Given the significant role of suicidal ideation in causing suicide attempts, a greater effort should be undertaken to further understand and identify the risk factors of suicidal ideation among Thai women, who historically have received limited attention, to provide adequate actions to counter such behavior (Devries, 2011).

Generally, literature from Western societies suggests multiple risk factors for suicidal ideation among women. Severe mental illnesses (e.g., major depression) have been recognized to be the strongest predictor of suicidal behaviors in Western countries (Hong, Li, Fang & Zhao, 2007). Still, these findings may not be generalizable to Asian countries such as Thailand because of marked differences in economic conditions and cultural traditions. According to a recent review by Chen, Wu, Yousuf and Yip (2012), the prevalence of mental illnesses among suicides in Asian countries occurred less often than in Western countries, indicating that suicide in Asian countries has been understood not mainly as the sequence of such mental illnesses but more as a response to psychosocial stressors. As a result, suicide may be seen as a traditional form of escape from such challenges and stressors for Thai women (Luoma & Villatte, 2012; Pearson & Liu, 2002).

In Thailand, distinctive cultural beliefs and economic conditions exist that put Thai women under high psychosocial stress and in turn make them vulnerable to suicidal behaviors (Office of the Surgeon General, 2001). A common psychosocial stressor highly reported by Thai
women is intimate partner violence (IPV) (Thananowan & Vongsirimas, 2014). IPV against women occurs in all countries. Despite this, the rates of IPV differ generally across continents. For example, women in South-East Asia, including Thai women, experience IPV, higher than those in Western cultures (Fulu & Miedema, 2015; Ross, Stidham, Saenyakul, & Creswell, 2015). Certain cultural factors such as “power distance” have prevalent influence across Southeast Asia, suggested as facilitators for committing IPV against Southeast Asian women, including Thai women (Ross & Ross, 2012; Yang, 2008). This cultural belief often makes Thai women to be more vulnerable to IPV. Power distance is described as the belief among Asian women, who are assumed to be the less-powerful members of a society (Anbari, Khilkhanova, Romanova & Umpleby, 2003; Ross & Ross, 2012), that social power is often inherently distributed in unequal ways, and that this essential part of reality needs no justification (Anbari, 2003). In regard to IPV, power distance places men in a higher position on the social hierarchy than women and make women believe that a husband’s behavior, even abusive behavior, is always justified. Women exposed to IPV have no way out, because the cultural system accepts these acts of violence. If the woman asks for divorce due to exposure to IPV, she usually faces numerous problems, such as non-acceptance from society and financial constraints. The tendency of women to experience stress and psychic pain results mainly from their lower social status with less power over their environment could render them more vulnerable to IPV, strongly associated with suicidal ideation worldwide (Chen, et al., 2012; Van Orden et al., 201).

Perceived social support has been found to be an effective protective strategy against suicidal behaviors (Breton, et al., 2015; Kleiman, 2013 & Kumar & George, 2013). In contrast, weak social connections and support from family, friends, or significant others have been significantly associated with poor mental health, including suicidal behaviors. Consequently,
seeking social support is encouraged and generally brings about positive psychological outcomes such as decreased suicidal ideation (Breton, et al., 2015; Kleiman, 2013; Kumar & George, 2013 & You, Van Orden & Conner, 2011). Several factors influence the extent to which people solicit social support. One such a factor is culture (Kim, Sherman, Ko & Taylor, 2006 & Taylor, Sherman, Kim, Jarcho, Takagi, & Dunagan, 2004) Varnum, Grossmann, Kitayama & Nisbett, 2010). Literature shows that Southeast Asian women are less likely to seek social support in dealing with their stressful events compared to Western women (Kim, Sherman, Ko & Taylor, 2006 & Taylor, Sherman, Kim, Jarcho, Takagi, & Dunagan, 2004). Individualist cultures, such as those found in Western countries, are characterized as independent where a person values personal goals more than group goals and makes his or her own decisions voluntarily based on personal choice (Darwish & Huber, 2003). Making one’s relationships with others take an independent form and is freely chosen with relatively few obligations. Thus, in social support transactions, when people seek help from others, they understand that those persons freely choose to help or provide certain support and assumes that this act is a reflection of the others’ own volition to help. As a result, in the individualistic cultures, people can ask for social support with relatively little caution, and seeking support generally results in positive health outcomes for both the receiver and the provider (Kim, Sherman & Taylor, 2008). Conversely, collectivist cultures, such as in many Asian cultures, are characterized as interdependent where a person values group goals and considers personal goals as secondary (Varnum, Grossmann, Kitayama & Nisbett, 2010). In these cultures, one’s relationships with others take an interdependent form in which these interdependent relationships are less voluntary and come with a greater sense of obligation (Adams & Plaut, 2003). In social support transactions, when people seek help from others, they understand that those persons have obligations to provide help or support them, even
if those persons have limited abilities or volition to help. Because of this, one is considerably more cautious about disclosing personal problems to others and explicitly seeking social support from them in the purpose of avoiding placing a burden on those willing to help. Research shows that people in the collectivist cultures, such as in the Thai culture, uncommonly solicit social support explicitly (Kim, Sherman, Ko & Taylor, 2006). Given the importance of seeking social support, women who do not seek social support are more vulnerable to psychological health problems, like suicidal ideation (Do, Weiss, & Pollack, 2013; Ross, Sawatphanit, Suwansujarid, & Draucker, 2007).

Cross-cultural research has found that Southeast Asian and Western cultures differ in their sensitivity to “fear of isolation,” described as feelings of fear or anxiety in situations where people experience loneliness, a lack of community, solitude, confinement, or quarantine (Dennis, Federici & Hünefeldt, 2014 & Kim & Markman, 2006). That does not mean that people in Southeast Asia and Western countries differ in their states of anxiety relating to social isolation, but Southeast Asians are more sensitive to situations that might bring about social isolation than are Western people (Kim & Markman, 2006). Seeing this, women in Southeast Asia who feel isolated due to remaining unmarried, getting divorced or not having children are more emotionally influenced than their peers in Western countries, potentially making them more vulnerable to suicidal behaviors.

Women in Southeast Asia have fewer opportunities for paid jobs, which also negatively affect their mental well-being and can cause thoughts of suicide. Employment generally has a beneficial effect on psychological health through bringing interest and fulfillment, structure, and sense of control as well as income, social status, and social contacts (Niaz & Hassan, 2006). On the contrary, employment has also been found to be associated with negative mental health
outcomes such as suicidal ideation (Woo & Postolache, 2008). In Thailand, female workers currently tend to change their roles from housewives to working women due to the local economic structure increasingly changing from the agricultural sector to industry and service sectors (Kim, 2006). About 80% of the female working population works in the manufacturing sector. These jobs are characterized by psychosocial hazards such as lack of autonomy, heavy workloads, long work hours and shift work, jeopardizing family relationships and health-related quality of life, all of which potentially leave them vulnerable to suicidal ideation (Leka, Jain, & World Health Organization, 2010). Although employed people might experience suicidal ideation because of work overload, existing research shows that in low and middle-income countries, suicidal ideation is more likely to be reported among unemployed people than those employed (Lemmi, et al., 2015).

The relatively high prevalence of suicidal ideation among Thai women might reflect their high exposure to the above psychosocial stressors threatening their health-related quality of life (Zhao, Qu, Peng, & Peng, 1994). Despite a growing interest to identify such risk factors of suicidal ideation among Western as well as some Asian populations, a lack of studies exists as to vulnerable populations such as Thai women.

Study Purpose

The purpose of the current study was to examine whether psychosocial factors including intimate partner violence (IPV), perceived social support, quality of life (QOL), employment status, partnership status, and parenthood status predict suicidal ideation in Thai women.

Study Hypotheses

The study hypotheses are as follows:
1) Suicidal ideation can be predicted by intimate partner violence, perceived social support, quality of life (QOL), employment status, partnership status, and/or parenthood status.

2) Of these predictors, QOL would have most relevant influence on suicidal ideation in Thai adult women as compared to the other variables.

Study Variables

The independent variables in this study include intimate partner violence, perceived social support, QOL, employment status, partnership status, and parenthood status. The dependent variable is suicidal ideation. Conceptual and operational definitions of study variables are presented in Table1.1.
<table>
<thead>
<tr>
<th>Concept</th>
<th>Conceptual Definition</th>
<th>Operational Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>QOL</td>
<td>“The individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns” (WHO, 1996. p.5)</td>
<td>The total score of the World Health Organization Quality of Life (WHOQOL-BREF) scale (WHO, 2004).</td>
</tr>
<tr>
<td>IPV</td>
<td>Any abusive or threatening physical, sexual, or psychological act against women inflicted by her spouse (Modallal, et al., 2012).</td>
<td>Four categories based on the number of violence types experienced by participants. Physical and sexual IPV were measured by the Severity of Violence Against Women Scale (SVAWS) (Marshall, 1992), while the psychological IPV is measured by the Psychological Maltreatment of Women Inventory (PMWI) (Tolman, 1989).</td>
</tr>
<tr>
<td>Perceived social support</td>
<td>One’s perception about the extent to which she is cared for, feels loved, and is understood by her family,</td>
<td>The total score of the 12-item multi-dimensional scale of perceived social support (MSPSS)</td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
<td>Categories</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Partnership Status</td>
<td>A demographic characteristic reflecting a person’s status with respect to his/her current relationship</td>
<td>Two categories: (1) not partnered (i.e., never married, divorced or widowed) versus (0) partnered (i.e., married with marriage certificate, married without certificate, or being in a de facto relationship)</td>
</tr>
<tr>
<td>Parenthood status</td>
<td>A demographic characteristic reflecting whether a person has children or not</td>
<td>Two categories: (1) not having a child versus (0) having at least one child.</td>
</tr>
<tr>
<td>Employment status</td>
<td>A demographic characteristic reflecting whether a person has a job with positive earnings, irrespective of the number of hours of work</td>
<td>Two categories: (1) currently unemployed versus (0) currently employed as farmer, laborer, government employee, cooperation employee, professional, small business employee, or other occupations.</td>
</tr>
<tr>
<td>Suicidal ideation</td>
<td>The “desire” to die or the “desire” to engage in lethal behaviors</td>
<td>Two categories: (1) have suicidal ideation versus (0) having no suicidal ideation.</td>
</tr>
</tbody>
</table>
Running Head: PSYCHOSOCIAL DETERMINANTS OF SUICIDAL IDEATION

Significance

The availability and quality of suicide data in Thailand is poor to fair at best, and suicidal cases are underreported due to stigmatization among Thai populations and the fact that these acts are illegal. When considering such limitations in the accuracy of suicide data, the suicide prevalence among Thai women is much higher than the suicide data reported. The economic burden of suicide in Southeast Asian countries is estimated to be approximately $200 million to $1 billion. Suicides have devastating effects on family members and loved ones of the people who have died by suicide; they are known as suicide survivors. Suicidal behaviors can be traumatic, negatively affecting mental health of suicide survivors. Research indicates that suicide survivors typically have higher rates of depression, anxiety, physical problems, and low income. Children of parents who committed suicide are at a significantly increased risk for committing suicide themselves. The younger the child is at the time of the parent’s suicide, the greater the risk of his or her own suicide (Chen, et al., 2012).

Given the devastating impacts of women’s suicide on families and society in Thailand, risk and protective factors associated with suicidal behaviors among Thai women must be investigated. Thai women are assumed to be vulnerable to suicide because of their high exposure to psychosocial risk factors. It is thus important to understand the interplay of multiple psychosocial risk factors, common among Thai women, at the proximal end of the suicidal spectrum in terms of early detection and suicide prevention strategies. Because suicidal ideation was measured by item #19 of the Thai Depression Inventory Scale (Lotrakul, Sukanicg, 1999).
necessarily precedes suicidal attempts, the identification of predictors of suicidal ideation would better help in understanding suicidal risk from the beginning of suicidal process (Jacobs, et al., 2010).

Research in Western countries has identified severe mental illness as a strong and sometime independent risk factor for suicidal ideation (Nock, et al., 2008). The findings of these studies, however, might not necessarily be applicable to women in Southeast Asia. Evidence exists that some women in Southeast Asia who had committed suicide have never experienced mental illnesses before committing suicide, indicating that the etiology of suicidal behaviors is no longer limited to some mental illnesses, but can be caused by psychosocial stressors. There is the lack of research about the psychosocial risk factors of suicidal ideation among Thai women. Without sound research evidence, cost-effective suicide prevention programs for this vulnerable population will not be possible. Given that suicidal ideation might be present in people without any presence of mental illnesses, researchers must conduct studies about the risk factors of suicidal ideation in the general population sample at large rather than just on psychiatric patients who receive inpatient or outpatient clinical services. This will help to plan suicide prevention strategies not only for psychiatric patients, but also for the general community who do not visit mental health services but who are still vulnerable to suicidal ideation.

Given the importance of conducting research about the psychosocial risk factors of suicidal ideation among community-based Asian populations, this study will help address a gap in the literature regarding the risk factors of suicidal ideation in a vulnerable population. Practically, nurses and other health care providers in Thailand can use this information to identify Thai women at risk for experiencing suicide ideation and develop an effective
community-based suicide prevention and screening programs tailored to the Thai women’s contextual and cultural aspects.

Theoretical Framework

Several theories attempt to explain the causality of suicidal behaviors. The causality of suicidal behaviors is based on complicated and numerous processes and conditions that underlie suicidal ideation as well as non-lethal and lethal suicidal attempts (Nock, et al., 2008). Various theories related to suicidal behavior explains the causality of suicidal behaviors differently based on biological, cognitive-behavioral, developmental/systems, or psychosocial etiologies. For instance, biological theories propose that suicidal behavior results from dysregulation of the serotonergic system in the ventromedial prefrontal cortex (Mann, 2003; Plutchik, Van Praag, & Conte, 1989; van Pragg, 2001). Cognitive-behavioral theories account for the relationship between hopelessness and suicidal behaviors (Beck, Brown, Berchick, Stewart, & et al., 1999; Kovacs & Garrison, 1985). Family systems theories explain only the association between family conflict and suicidal behavior (Richman, 1986; Sabbath, 1969). Finally, psychosocial theories assert that suicidal behaviors are usually caused by psychosocial factors (Joiner, 2005).

Scholars suggest that suicide-related theories must account for cultural differences in suicide rates and etiology when such theories are used to explain the etiology of suicidal behaviors in certain populations (Van Ordan, Witte, Cukrowicz, Braithwaite, Selby & Joiner, 2010). Research indicates that in Southeast Asian cultures, psychosocial risk factors (e.g., IPV, lack of social support, unemployment, and low quality of life) have been identified as the strongest predictors of suicidal behaviors (Devries, et al., 2011 & Peltzer, Yi & Pengpid, 2017). Psychosocial theories of suicidal behaviors are thus more appropriate to be used in understanding the etiology of suicidal behaviors in Thailand. A common theory that explains the etiology of
suicidal behaviors from psychosocial perspective is the Interpersonal Theory of Suicidal Behaviors (Joiner, 2005; Van Orden, et al., 2010), which guides the current study.

The proposed study is based on the Interpersonal Theory of Suicide Behavior (Joiner, 2005; Van Orden, et al., 2010), which contrasts with previous studies not guided by theory (Chan, Straus, Brownridge, Tiwari, & Leung, 2008; Crosby, Gfroerer, Han, Ortega & Parks, 2011; Devrise et al., 2011; Endo, et al., 2014 & Gulliver & Fanslow, 2013). Investigating the suicidal ideation phenomenon using the Interpersonal Theory of Suicidal Behaviors helps identify people who are at risk for suicidal ideation and determines how much they desire suicide. This enables healthcare providers to offer healthcare services, consultations, and resources that could protect people at risk from committing suicide. The Interpersonal Theory of Suicidal Behaviors is an evidence-based theory that explains the difference between suicidal ideation and other suicidal behaviors (Van Orden, et al., 2010). For example, suicidal ideation refers to the “desire” to die (passive suicidal ideation) or the “desire” to engage in lethal behaviors (lethal suicidal ideation). Non-lethal suicidal attempt is described as a self-initiated, potentially injurious behavior accompanied by presence of intent to die, but without a fatal outcome. However, lethal suicidal attempt refers to cases in which a suicide attempt causes death (Van Orden, et al., 2010).

Under the Interpersonal Theory of Suicidal Behaviors, the most robust risk factors for suicidal behaviors (suicidal ideation, non-lethal suicidal attempts, and lethal suicidal attempts) include social isolation, family conflict, unemployment, health problems, and previous suicide attempts. The theory illuminates how these diverse factors relate to suicidal behaviors. Of these risk factors, social isolation, family conflict, unemployment, and health problems are assumed to be risk factors for suicidal ideation. Also, previous suicidal attempts are found as the preeminent risk factor for futuristic suicide attempts (lethal or non-lethal suicidal attempts). In light of this,
discussion of this theory will focus on factors related to suicidal ideation, since this study
primarily focuses on the predictors of suicidal ideation, not suicidal attempts. In sum, the
simultaneous presence of these psychosocial factors is sufficient, but not necessary, for suicidal
ideation to occur. Other pathways to suicidal ideation can possibly be explained by different
theoretical perspectives (Joiner, 2005; Van Orden, et al., 2010).

The Interpersonal Theory of Suicidal Behaviors is based on the assumption that
individuals die by suicide because they have the “desire” and the “capability” to die by suicide.
Three constructs central to suicidal ideations and behaviors arise: thwarted belongingness;
perceived burdensomeness, and the acquired capability for suicide. The theory proposes that the
presence of these three constructs, or a combination of them can lead to suicidal ideation. Also,
each of the three theoretical constructs must be simultaneously present to achieve the transition
from suicidal ideation to suicidal behavior (Joiner, 2005; Van Orden, et al., 2010). The current
study will focus on the constructs related to suicide ideation, which are thwarted belongingness
and perceived burdensomeness.

*Thwarted belongingness* refers to the perceptions of lacking connection with others and
not belonging to any particular group (Joiner, 2009). Having social interaction and feelings of
belongingness are often assumed to be fundamental human needs, important for people’s
psychological health and well-being. When human needs of belongingness are met, people report
lower risk for suicide ideation. But when human needs of belongingness remain unmet, known as
thwarted belongingness, higher levels of suicidal ideation are reported (Van Orden et al., 2010).
Joiner (2005) proposed that lack of perceived social support, IPV, and social dysfunction (one
dimension of quality of life) are common examples of a situation or behavioral indicators in
which individuals experience thwarted belongingness (Joiner, 2005).
*Perceived burdensomeness* is defined as a mistaken perception that person’s life presents a burden on significant others such as family, friends, society, etc. (Joiner, 2009). This mistaken perception produces unrealistic negative thoughts that a person’s life is unworthy and significant others would be better if the person dies (Joiner, 2009). Both perceived burdensomeness and thwarted belongingness are considered dynamic cognitive-affective states rather than stable ones because they vary over time (Van Orden et al., 2010). Individuals having lower levels of quality of life related to physical or psychological health may feel as though they pose a burden on significant others (Joiner, 2005 & Rowe, 2014).

As noted above, poor quality of life can increase both perceived burdensomeness and thwarted belongingness. For instance, lower levels of psychological and physical quality of life can contribute to the increase of perceived burdensomeness, but social dysfunction might be related to the increased feelings of thwarted belongingness. Because of its relationship with both feelings (perceived burdensomeness and thwarted belongingness), poor QOL is assumed to be the strongest predictor of suicidal ideation (Joiner, 2005 & Rowe, 2014).

The Interpersonal Theory of Suicidal Behaviors also accounts for some important demographic variables, such as parenthood status, employment status, and partnership status. According to the theory, being unmarried is mostly a distal risk factor for suicidal ideation. Being unmarried or not having children can foster a perception of thwarted belongingness, which in turn might increase the risk for suicidal ideation. Being unemployed develops a perception of being a burden on family members, which can increase risk for suicidal ideation (Van Orden, et al., 2010).
**Figure 1.1. Study Model Based on Interpersonal Theory of Suicidal Behavior**

- **Thwarted Belongingness**
  - Having no Children
  - Intimate Partner Violence
  - Lack of Social Support
  - Having no Partner
  - Poor Social Quality of Life

- **Perceived Burdensome**
  - Poor physical, environmental, & psychological Quality of Life
  - Unemployment

**Suicidal Ideation**
Figure 1.2. Substruction Based on Interpersonal Theory of Suicide Behavior (Joiner, 2005; Van Orden, et al., 2010)
CHAPTER 2

Literature Review

This chapter presents the research literature relevant to prevalence and risk factors of suicidal behaviors, but focuses primarily suicidal ideation. It is organized into five main sections: (1) worldwide suicidal behaviors prevalence; (2) prevalence of suicidal ideation in Thailand; (3) risk factors of suicidal ideation worldwide; (4) risk factors of suicidal ideation in Thailand; and (5) detailed discussion of psychosocial risk factors of suicidal ideation.

Worldwide Suicidal Behaviors Prevalence

Completed suicide. Suicide is a worrisome phenomenon worldwide. The WHO (2012) estimates that approximately 800,000 people die as a result of suicide every year. Despite this, it is estimated that this rate will increase in the future when approximately 1.53 million individuals will die by suicide, and 10-20 times more individuals will commit a suicide attempt worldwide by 2020. This represents on average one suicidal death every 20 seconds and one suicidal attempt every 1-2 seconds (Bertolote & Fleischmann, 2015).

In 2012, suicide accounted for 1.4 % of all deaths in the world, making it the fifteen leading cause of death throughout the life span and the second among 15- to 29-year-olds globally (WHO, 2012). It has been reported that 78% of global suicide occurred in low- and middle-income countries in 2015. Rates of completed suicide among males are higher than among females in all countries with exception of China. Unlike in Western countries, where suicide rates for males are about 3–4 times higher than those for females, in several Asian countries, the gap between male and female suicide rates is smaller and sometimes similar. For example, the gender ratio (male-to-female) for suicide behaviors in China is about 1:1 (WHO, 2012).
Non-lethal suicidal behaviors. Non-lethal suicidal behaviors include suicidal ideation and non-lethal suicidal attempts. A study analyzed significant, cross-national data from the WHO to estimate the 12-month prevalence of suicidal behaviors, including suicidal ideation, plans, and attempts. This study included 108,705 adults from 10 countries classified as developed by the World Bank (Belgium, France, Germany, Israel, Italy, Japan, Netherlands, New Zealand, Spain, and the United States) and 11 countries classified as developing (Brazil, Bulgaria, Colombia, India, Lebanon, Mexico, Nigeria, the People’s Republic of China, Romania, South Africa, and Ukraine). The results showed that 12-month prevalence of suicide ideation and non-lethal suicidal attempts was 2.0% and 0.3%, respectively, for developed countries and 2.1% and 0.4% for developing countries. Suicidal behaviors occur mostly at similar rates in both developed and developing countries (Borges, et al. 2010).

Similarly, researchers conducted another cross-national study to estimate the cross-national prevalence of suicidal behaviors across 17 countries using data from the WHO (Nock, et al., 2008). In this study, 84,850 adults were interviewed from 17 countries from various regions: Africa (Nigeria; South Africa); the Americas (Colombia; Mexico; the United States), Asia and the Pacific (Japan; New Zealand; Beijing and Shanghai in the People’s Republic of China), Europe (Belgium; France; Germany; Italy; the Netherlands; Spain; Ukraine); and the Middle East (Israel; Lebanon). The World Bank classifies China, Colombia, Lebanon, Mexico, Nigeria, South Africa, and Ukraine as less developed or developing countries; all other survey countries are listed as developed. The results showed that the cross-national lifetime prevalence of suicidal ideation and non-lethal suicidal attempts in the overall sample were 9.2% and 2.7%, respectively. Prevalence estimates in developing countries are similar to those in developed countries in terms of suicidal ideation (3.1% to 12.4% versus
3.0% to 15.9%, respectively) and nonlethal suicidal attempts (0.7% to 4.7% vs. 0.5% to 5.0%, respectively). Across all countries, among adults with suicidal ideation, the probability of ever making a suicidal attempt was 29.0%. About 60% of transitions from suicidal ideation to attempt occurred within the first year after ideation onset (Nock, et al., 2008).

Using data from the WHO, a study examined the prevalence of life-time and past-month suicidal ideation and attempts in adult women (N = 20967) from low- and middle-income countries including Brazil, Ethiopia, Japan, Namibia, Peru, Samoa, Serbia, Thailand, and Tanzania. The results showed that the prevalence of lifetime suicide attempts ranged from 0.8% (Tanzania) to 12.0% (Peru); lifetime suicidal ideation from 7.2% (Tanzania) to 29.0% (Peru), and past-month suicidal ideation from 1.9% (Serbia) to 13.6% (Peru) (Devries, et al., 2011).

Each of these studies had limitations that might have compromised validity. For example, these studies had high non-response rates, affecting both external and internal validities (Borges, et al. 2010; Nock, et al., 2008). Self-reporting instruments have been used to measure suicidal behaviors. Suicidal behaviors are generally stigmatized and illegal worldwide (Chen, et al., 2012). Therefore, these behaviors could have been underreported by participants (Borges, et al. 2010; Devries, et al., 2011; Nock, et al., 2008).

Prevalence of Suicidal Behaviors in Thailand

**Completed suicide.** According to data from the WHO (2015), suicide is the twelfth cause for death in Thailand. In 2013, the suicidal rate was 6.3 cases per 100,000 of people in Thailand. Gender differences exist in suicide rates, where Thai males died by suicide more than Thai female with rates of 9.7 and 2.85 per 100,000, respectively. Based on these global WHO
data, Thailand ranks as fifty sixth among other countries across continents in terms of the rates of suicide.

Nevertheless, according to the Thai Public Health Ministry, these rates of suicide in Thailand provided by the WHO are undoubtedly outdated. A Thai Public Health Ministry spokesman reported that there are about 4,000 Thai people commit suicide each year with average of 300 cases per month, giving Thailand the third-most suicides in the world. The most commonly-used methods to commit suicide are hanging (70%), poisoning (20%), and shooting (10%) (Banks, 2016). Thai men were more likely to die by suicide than Thai women, with a ratio of 3.4:1, respectively (Banks, 2016; Lotrakul, 2006). Also, the incidence rates of completed suicide in Thailand differ by region. Northern regions had the highest incidence rate of completed suicides in Thailand in 2010, with 12.5 compared to 5.90 per 100,000 of the nationwide population (Ministry of Public Health Thailand, 2011).

**Non-lethal suicidal behaviors.** Few studies examined the prevalence or incidence of non-lethal suicidal behaviors including non-lethal suicidal attempts and suicidal ideation in the Thai population. Regarding non-lethal suicidal attempts, the lifetime prevalence was higher among adolescent-aged females than males, with prevalence of 7.2% and 5.7%, respectively (Page, Yanagishita, Suwanteerangkul, Zarco, Mei-Lee & Miao, 2006). Thai college students demonstrated 3.7% as a prevalence of non-lethal suicidal attempts in the last 12 months. The male-to-female ratio remains unreported (Kay, Li, Xiao, Nokkaew). In Thai reproductive-age women, the lifetime prevalence of suicidal ideation was 22.1% (Devries, et al., 2011).

The quality of suicide data in Thailand is described as poor because suicidal cases go underreported due to stigmatization and regarding these acts as illegal among Thai populations.
When considering such limitations in the accuracy of suicide data, the suicide rates among Thai people is probably much higher than these numbers reported (Chen, et al., 2012).

**Worldwide Suicidal Ideation Predictors**

The existing literature contains numerous risk factors of suicidal behaviors worldwide. As practicalities limit the inclusion of all predictors for suicidal behaviors, the current discussion will be limited to those predictors shown to be associated with increased risk for suicidal ideation, as this is the primary outcome of the current study.

Numerous risk factors have been associated with suicidal ideation among adults worldwide. Regardless of populations, these risk factors include, but are not limited to, depression (Chan, Straus, Brownridge, Tiwari, & Leung, 2008; Legleye, et al., 2010; Shani, et al., 2016; Vanderoos, et al., 2013), loneliness (Legleye, et al., 2010; Lee, et al., 2013; Gulliver & Fanslow, 2013; McLaren, Gomez, Gill, & Chesler, 2015), forced sexual intercourse (Legleye, et al., 2010), using illicit drugs (Legleye, et al., 2010), existence of a bad relationship between parents (Lee, et al., 2013; Legleye, et al., 2010), being exposed to intimate partner violence (Chan et al., 2008; Devries et al., 2011; Gulliver & Fanslow, 2013), experiencing a childhood sexual abuse (Devries, et al., 2011), being unemployed (Crosby, et al., 2011; Legleye, et al., 2010; Kazmi, et al., 2013; Hiswåls, et al., 2015; Vanderoos, et al., 2013), being middle-aged (Legleye, et al., 2010), low household income (Legleye, et al., 2010; Lee, et al., 2013), lack of social support (Endo, et al., 2014; Hiswåls, et al., 2015; Shenouda, & Basha, 2014; Vanderoos, et al., 2013; Park, Cho, & Moon, 2010), being single, divorced, or widowed (Hiswåls, et al., 2015; Lee, et al., 2013; McLaren, et al., 2015; Roškar, Podlesek, Kuzmanić, Demšar, Zaletel, & Marušič, 2011; & Vanderoos, et al., 2013), being childless (Shani, et al., 2016), higher perceived
stress (Hiswâls, et al., 2015 & Shenouda, & Basha, 2014), and low level of educational attainment (Lee, et al., 2013).

In a review conducted by Chen, Wu, Yousuf, and Yip (2012), regional, gender, and age-related differences in terms of these predictors of suicidal ideation have been globally identified. For example, depression or other psychiatric diagnoses are considered as more common risk factors for suicidal behaviors, including ideation, among people in Western countries than those in Asian countries. In a more recent psychological autopsy study conducted in Asia, major depression was found in only 2% of suicide cases. Still, psychosocial stressors such as job loss, financial problems, and family conflicts are more commonly reported by Asian people as predictors for suicidal behaviors than those in Western countries. Further, gender differences occur in terms of psychosocial risk factors among Asian population. For instance, family conflicts and lack of social support are key risk factors for Asian women, whereas financial or work-related problems are more common risk factors for suicidal behavior among Asian men (Chen, et al., 2012).

In terms of age-related differences, a comprehensive review about the risk factors for suicidal ideation shows that the most consistent and robust risk factors for suicidal ideation among adults worldwide include mental health problems, physical health problems, family conflict, unemployment, and social isolation indices (e.g., lack of social support, being unmarried or divorced, and not having children) (Van Order, et al., 2010). But childhood losses (parental death, parental divorce, or other major losses) and indicators of childhood family dysfunction (parental criminal behavior, physical abuse, sexual abuse, family violence, economic adversity) are strongly associated with adolescent-aged populations (Borges, et al., 2010).

**Predictors of Suicidal Ideation in Thailand**
Few studies examined the risk or protective factors of suicidal ideation in Thai populations. For example, Thai adolescent have reported various psychosocial and health-risk behaviors as risk factors for suicidal ideation. Psychosocial risk factors included sadness and lack of parental attachment. Health-risk behaviors included current alcohol use (Peltzer & Pengpid, 2017). Thai college students reported a significant negative association between quality of life and suicidal behaviors, including suicidal attempts and ideation. The psychological domain of quality of life was the strongest predictor of suicidal ideation in Thai college students. (Kay, Li, Xiao, Nokkaew).

In all, these studies had limitations, thereby compromising their validity. First, the small and convenient samples used in these studies limited the generalization of the findings to other groups of populations. Second, self-reporting instruments were used to assess these studies’ variables, making the results vulnerable to social desirability or response bias. As an aside, cross-sectional designs used in the both studies make it difficult to determine causality (Kay, et al., 2009; Peltzer & Pengpid, 2017). Third, other psychosocial factors found to be strongly associated with suicide behaviors among Asian populations were not included in these Thai studies, such as social support, IPV, work-related problems, or employment status (Chen, et al., 2012).

**Psychosocial Predictors of Suicidal Ideation**

As reported above, psychosocial risk factors of suicidal ideation have been found to be strongly associated with suicidal ideation among Asian populations. However, these factors have never been studied among Thai women. There are several psychosocial risk factors commonly experienced by Thai women and strongly associated with suicidal ideations in other populations worldwide. These factors include IPV, lack of social support, unemployment, being unmarried or
divorced, or not having children. Thus, this proposed study focuses on these risk factors. This section discusses in details previous studies that examined the relationships between these factors and suicidal ideation in different populations across continents.

**Intimate partner violence.** Intimate partner violence (IPV) has been found to be a widespread phenomenon in western and eastern countries; however, in higher percentages in eastern countries (Abramsky et al., 2011 & Niaz & Tariq, 2017). IPV is a common form of family violence including physical, sexual, and emotional abuse and controlling behaviors by an intimate partner (Niaz & Tariq, 2017). IPV takes many forms including physical violence by means of punching, kicking, stomping, use of weapons to cause injuries, and killing, sexual violence through rape or forced unwanted sex, and psychological violence by tormenting, verbal assault, threats, locking up, use of social and economic means to torment, refusal to provide financial support, or verbal degrading. IPV often took place in the home. The perpetrator of violence against women can be the women’s husband, ex-husband, or lover Abramsky et al., 2011; Archavanitkul, et al., 2005; Niaz & Tariq, 2017)

IPV has been found to be associated with heightened risk of suicidal ideation and behaviors among several populations across continents (Devries et al., 2011; Weaver, et al., 2007; Wolford-Clevenger, Vann & Smith, 2016). In Western countries such as the U.S., 58% of a shelter sample of battered women (N = 50) had experienced sexual and physical IPV, which is significantly correlated with suicidal ideation. Those battered women who reported suicidal ideation within the past week experienced more severe forms of physical violence (Weaver, et al., 2007). Given IPV and suicidal behavior are major public health problems among African Americans, it was examined whether or not IPV and suicidal ideation are correlated in urban African American women (N = 323). Using the Women’s Experience with Battering (WEB)
scale used to measure physical and psychological abuses, researchers found that IPV, either psychological or physical violence, was significantly associated with increased suicidal ideation in this population of interest (Leiner, Compton, Houry & Kaslow, 2008). Among American college students (N = 588), however, there were gender differences in the associations of sexual abuse, emotional, and physical intimate partner violence with suicidal ideation, while controlling for the influence of depression. Researchers found that physical abuse, but not sexual or emotional abuse, was significantly associated with increased suicidal ideation in men. In contrast, emotional abuse, but not physical abuse or sexual abuse, associated significantly with increased suicidal ideation in women (Wolford-Clevenger, Vann & Smith, 2016).

In Eastern countries, studies were conducted in Jordan, India, China, Taiwan, Pakistan, and Thailand to examine the relationship between IPV and suicidal ideation in different populations. In Jordan, 15.7% of women exposed to IPV (N = 95) reported suicidal ideation. The most commonly form of IPV reported by those women was psychological abuse (Hamdan-Mansour, Constantino, Shishani, Safadi, & Banimustafa, 2012). In Chinese women living in rural areas (N = 1522), the prevalence of psychological, physical, and sexual abuse was 24.6%, 5.5%, and 1.1%, respectively. Women who had suffered physical were more likely to report suicidal ideation, with 4.57 more than those who had not experienced physical abuse (Gao & Jacka, 2012). In Pakistan, where IPV against occurs commonly, suicidal ideation was reported by 75.8%, 74.1%, and 65.3% of the married women (N = 759) exposed to sexual, physical, and psychological violence respectively (Ali, Mogren, & Krantz, 2013). Given that IPV is a health problem for aboriginal women in Taiwan (N = 840), the experience of abuse (including partner physical abuse, partner sexual abuse, and childhood physical abuse) correlated significantly with suicidal ideation after adjusting for age, alcohol and drug use, religious activity, and husband’s
employment status in a sample of 840 aboriginal Taiwanese women (Yang, Yang, Chang, Chen, & Ko, 2006). In refugee women along the Thailand–Burma border (N = 848), 7.4% of them reported past-month suicide ideation. Of those women who did not experience IPV, approximately 5% reported suicide ideation. However, 26.7% of those women who experienced IPV victimization reported suicide ideation, indicating the role of IPV in increasing suicidal ideation among those women (Falb, McCormick, Hemenway, Anfinson, & Silverman, 2013).

These previous studies have several limitations, potentially negatively affecting validity and the ability to draw firm conclusions. All studies used only one self-reported measure for IPV or suicidal ideation, and thus participants might have underreported abuse or suicidal ideation because of social desirability. In these studies, the instruments used for measuring IPV were the Composite the Women’s Experience with Battering (WEB) scale (Leiner, et al., 2008), Abuse Scale (Wolford-Clevenger, et al., 2016), the Arabic version of the Abuse Scale (Hamdan-Mansour, eta l., 2012), revised Conflict Tactics Scale (CTS2) (Gao & Jacka, 2012), Partner Abuse Scale: Physical (Weaver, et al., 2007), the Violence Against Women (VAW) questionnaire-World Health Organization (Ali, et al., 2013), and Abuse Assessment Screen (Yang, et al., 2006). These instruments operationalize IPV differently, making it difficult to draw valid empirical generalizations. Although some studies controlled for demographic or psychological factors (Ali, et al., 2013; Yang, et al., 2006; Wolford-Clevenger, et al., 2016), in general, other confounders such as psychosocial factors were not comprehensively controlled, thereby limiting internal validity (Ali, et al., 2013; Falb, et al., 2013; Gao & Jacka, 2012; Hamdan-Mansour, eta l., 2012; Leiner, et al., 2008; Weaver, et al., 2007; Wolford-Clevenger, et al., 2016; Yang, et al., 2006).
**Perceived social support.** Several theories explain the role that a positive social connection plays as a protective factor against suicidal behaviors, shedding light on the crucial roles of social context in understanding the risk for suicidal behaviors. Suicidal behavior is an example of an individual behavior that is influenced by social connections. As a result, not only individual factors but also social environments, including interpersonal support, should be considered in attempts to explain suicidal behavior (King & Merchant, 2008).

Several studies in the U.S. and Asian countries (i.e., Japan, Korea, Nepal, and Taiwan) examined the association between social support and suicidal ideation in different populations. In the U.S., using a large sample of 3,570 African Americans and 1,621 Caribbean blacks age 18 and older, researchers found perceived emotional support to be significantly associated with lower odds of suicide ideation; however, negative interaction with family was significantly associated with greater odds of suicide ideation (Lincoln, Taylor, Chatters & Joe, 2012). Similarly, a significant negative association between emotional support and suicidal ideation was observed in American undergraduate students (N = 439) (Hirsch & Barton, 2011).

In Asia, and specifically in Japan, two studies explored the relationship between social support and suicidal ideation. In the Japanese general population (N = 1080), low emotional-support increased past-year suicide ideations through depression (Aiba, Matsui, Kikkawa, Matsumoto, & Tachimori, 2011). Using a sample of homeless people in Japan (N = 423), perceived emotional social support was significantly associated with recurrent suicidal ideation in the two weeks prior to the study (Okamura, Ito, Morikawa & Awata, 2014). In a Korean study, a strong negative relationship occurred between social support and suicidal ideation in middle-aged adults (N = 10,922). Given that social support consists of emotional and instrumental support, lack of emotional support significantly influenced suicidal ideation during the past year.
in middle-aged men; further, poor instrumental support significantly influenced suicidal ideation during past year in middle-aged women, after adjusting for sociodemographic factors (e.g., educational level, occupation status, and household income), health behaviors, and health status (Park, Cho & Moon, 2010). In Nepali people living with HIV/AIDS (N = 322), suicidal ideation was significantly lower among those with the highest perceived family support (Amiya, Poudel, Poudel-Tandukar, Pandey & Jimba, 2014). In the Taiwanese study, given marital discord was positively associated with suicidal ideation, elderly aboriginal women (N = 1347) with marital discord who received emotional social support reported reduced risks of suicidal ideation by nearly 60% (Chen, et al., 2008).

These previous studies have one common limitation. Although these studies controlled for some demographic or psychological factors, other several extraneous variables were not comprehensively controlled, in turn limiting internal validity (Aiba, et al., 2011; Amiya, et al., 2014; Chen, et al., 2012; Hirsch & Barton, 2011; Lincoln, et al., 2012; Okamura, et al., 2014; Park, et al., 2010).

**Quality of life.** Women in Southeast Asia often live in deprivation of their socio-economic and legal rights and live in a system where discriminatory cultural traditions and laws are commonplace. They are affected by a lifetime social and psychological disadvantage, coupled with long years of child bearing. They often end up experiencing poverty, isolation, psychological disability, and physical dysfunction, all of which threaten their quality of life (QOL) (Jongudomkarn & Camfield, 2006). Quality of life is a multidimensional and comprehensive measure of an individual’s perceptions of his or her physical, psychological, and social functioning and well-being. It is widely recognized as an independent predictor of
morbidity and mortality indices, including suicidality (Cheung, Oemar, Oppe, Rabin, 2014; Min & Min, 2015).

Previous studies have revealed a significant association between QOL and suicidal ideation worldwide. In the U.S., 17% of patient with congestive heart failure (N = 294) reported suicidal ideation on several days over the past two weeks, and this was negatively affected by low poor physical and mental components of health-related quality of life (Lossnitzer et al., 2009). Similarly, in another American study, health-related quality of life associated negatively with suicidal ideation in youth aged between five and 18 years with bipolar disorder (N = 138) (Algorta, et al., 2011).

In Europe, and specifically in Spain, 32% of patients with fibromyalgia (N = 117) reported suicidal ideation. When comparing patients with suicidal ideation with patients without suicidal ideation, those with suicidal ideation reported higher interferences of their disease in daily activities and lower levels of physical and emotional components of quality of life (Triñanes, González-Villar, Gómez-Perretta, & Carrillo-de-la-Peña, 2015).

The results of two studies conducted one in Australia (Fairweather-Schmidt, et al., 2016) and the other in Korea (Kim & Kim, 2015) show that the relationship between suicidal ideation and quality of life is potentially bidirectional. Australian researchers conducted a longitudinal study to examine the effects of poor mental and/or physical health-related quality of life on suicidal ideation over eight years in a community-based adult population. Suicidal ideation at baseline was significantly associated with poorer mental health, but there also existed a better physical health-related quality of life at baseline. Nevertheless, suicidal ideation was associated with a declining physical component of health-related quality of life trajectory over the eight subsequent years. Lower mental health-related quality of life was correlated with higher odds of
suicidal ideation onset (Fairweather-Schmidt, Batterham, Butterworth, & Nada-Raja, 2016). A study conducted in Korea examined the effects of suicidal ideation on quality of life in patients with chronic obstructive pulmonary disease (COPD) (N = 556). The results showed that suicidal ideation negatively affected quality of life in male and female patients (Kim & Kim, 2015). These studies have a common limitation. Although they controlled for some demographic or psychological factors, other several extraneous variables (e.g. social support) were not comprehensively controlled for, which limited internal validity (Algorta, et al., 2011; Fairweather-Schmidt et al., 2016; Kim & Kim, 2015; Lossnitzer et al., 2009; Triñanes, et al., 2015).

**Employment Status.** Although poverty at individual levels is mostly concentrated in low- and middle-income countries, it takes place in all countries throughout the world. Poverty is a complex concept assessed using several indicators; however, one of the most commonly used indicator is unemployment. The recent economic crises that started in 2008 increased unemployment rates worldwide. Because of this, an increased interest in studying the effects of unemployment on mental health, including suicidal ideation across continents, has taken place (Hiswåls, et al. 2015; Lemmi, et al., 2015)

Unemployment as an independent risk factor for mental health problems including suicidal ideation is well-known all over the world (Hiswåls, et al. 2015; Lemmi, et al., 2015). In the U.S., job losses among female adolescents within each State's working age during the year preceding the survey increased the probability of suicidal ideation by two to three times as compared with those who did not lose their jobs a year before the survey. Still, job losses did not affect the suicidal ideation among adolescent males, non-Hispanic Whites, or Hispanics (Gassman-Pines, Ananat, & Gibson-Davis, 2014).
The associations between unemployment and suicidal ideation have recently received increased research attention in Europe countries (Lemmi, Crepaz-Keay, Cyhlarova & Knapp, 2015). For instance, in Sweden, unemployment status has been found to be both a significant and unique risk factor for suicidal ideation in the community-based population aged 16-65 years, after controlling demographic and psychosocial factors such as marital status, education, depression, anxiety, and social support (Hiswåls, et al. 2015). Similarly, in a French study, work and employment characteristics, such as lifetime unemployment, recent unemployment, and job insecurity, have been found negatively associated with past-year suicidal ideation in young adults, after controlling educational attainment, living with a partner, insufficient social support, alcohol abuse, depression, and parents’ history of depression (Dalglísh, Melchior, Younes, & Surkan, 2015). In Bosnia and Herzegovina, suicidal ideation was reported by 38% of epilepsy patients (N = 50). Unemployment and level of hopelessness were independently associated with suicidal ideation in these patients (Andrijić, Alajbegović, Zec, & Loga, 2014). A prospective non-experimental study of the general population in Finland found that increased suicidal ideation at baseline was significantly affected by the presence of several adverse life events, including unemployment (Hintikka, et al., 2009).

In Africa, two studies examined the relationship between unemployment status and suicidal ideation among Nigerian people living with HIV/AIDS. In the both studies, being unemployed with other factors such as being a female, living alone, having a partner with the disease, being unmarried, and having poor quality of life have been significantly associated with increased suicidal ideation (Chikezie, Otakpor, Kuteyi, & James, 2012; Ogundipe, Olagunju, & Adeyemi, 2015).
Although these studies provided initial evidence about the positive association between unemployment and suicidal ideation, they have a few limitations that prevented the full adoption of valid conclusion about this association. Some studies had low response rates, which resulted in an under-representation for certain groups in the populations of interest, such as women (Dalglish, et al., 2015; Hiswåls, et al. 2015). Also, these studies have not examined the effects of some confounding variables (e.g., social support, quality of life, and physical health problems), limiting internal validity and a comprehensive understanding of the phenomenon of interest (Andrijić, et al., 2014; Chikezie, et al., 2012; Dalglish, et al., 2015; Gassman-Pines, et al., 2014; Hiswåls, et al. 2015; Ogundipe et al., 2015).

**Partnership Status.** Health literature shows that marriage is associated with better mental health. Quite consistently, research has shown that those being never married or unmarried live shorter lives, experience higher rates of chronic illness, report lower subjective well-being, and are in worse mental health than those who are married (Hewitt, Turrell, & Giskes, 2012; Umberson, Thomeer, & Williams, 2013). Married people are in better health because they tend to have greater access than do unmarried individuals to economic, social, and psychological resources that positively affect mental health and prevent suicidality (Strohschein & Ram, 2016).

Researchers examined the associations between marital status and suicidal ideation in several studies worldwide. In the U.S., a significant association appeared between depression and suicidal ideation among police officers, and this association was stronger among unmarried women officers than married women officers (Violanti et al., 2009). Similarly, suicidal ideation was significantly more likely to occur among those who were unmarried in American pregnant women with history of neuropsychiatric illness (Newport, Levey, Pennell,
Ragan, & Stowe, 2007). Two Brazilian studies focused on pregnant women, and it revealed that being single, divorced, or widowed caused a significant association with suicidal ideation (Da Silva, et al., 2012; Huang, et al., 2012). In an Ethiopian study, a significant positive association took place between marital loss and suicidal ideation in the general population (Fekadu, et al., 2014).

In Asia, the association between marital status and suicidal ideation was examined in studies conducted in China and Korea. The Korean study focused on the correlation of suicidal ideation among obese people, and a significant association was found with marital status in females, but not in males. Specifically, married obese women reported no or less suicidal ideation compared to those who were unmarried (Shin, et al., 2015). Similarly, being unmarried was found as a risk factor for suicidal ideation among general population in Northwestern Urban China, including both females and males (Huiwen, et al., 2015). Like Chinese people living in an urban area, being never married was positively associated with suicidal ideation among general population living in a Chinese rural area (Zhang & Zhou, 2011). Although previous research is informative, none has been conducted in Thailand.

**Parenthood Status.** Social isolation is considered as one of the strongest and most reliable predictors of suicidal behaviors worldwide, including suicidal ideation. Social isolation contains various facets, including not having children. Adults without children might develop the feeling of social isolation, increasing their possibility for experiencing suicidal ideation. Conversely, having children may be a protective factor against such feeling and suicidal ideation (Van Orden, et al., 2010).

Some studies examined the effects of not having children on suicidal ideation. In an American study that focused on patients with posttraumatic stress disorder (N = 206), having
children was found to be a protective factor against the experience of suicidal ideation (O’Connor, et al., 2014). In a representative sample of the German general population (N = 2509), individuals reporting suicidal ideation were less likely to have children aged six to 13 years (Forkmann, Brähler, Gauggel, & Glaesmer, 2012).

Summary of Literature Review

Although the previous studies had limitations affecting their rigor, they provided initial evidence about the essential roles of psychosocial factors such as IPV, social support, QOL, employment status, parenthood status, and partnership status in the determinism of suicidal ideation in different populations across the continents. These factors have never been studied among Thai women, despite the notion that these factors are assumed to be highly prevalent and associated with suicidal ideation among this particular population. As a result, this study seeks to examine whether these psychosocial factors predict suicidal ideation in Thai adult women.
CHAPTER 3

Methods

Design

**Parent Study.** The current study used existing quantitative data obtained from a convergent mixed method study (cross sectional correlational and descriptive qualitative) (Ross, Stidham, Saenyakul, & Creswell, 2015). The primary aims of the parent study sought to identify the predictors of IPV, the association between IPV and health outcome, and the mediating effect of social support between IPV and health outcome. The data was collected from 284 Thai adult women receiving care at GYN/OB units at one of the largest hospitals in Thailand. The quantitative data obtained were analyzed using structural equation modeling AMOS version 21.0. The quantitative results showed that the rates of physical, emotional, and sexual IPV were 61.3%, 89.8%, and 54.4% respectively. IPV predictors included low family income, spousal gambling, alcohol use, and drug use. Being exposed to IPV was associated with lower QOL and higher physical and depressive symptoms. Emotional support weakly mediated the relationship between IPV and physical and depressive symptoms. The participants who experienced IPV had fewer physical and depressive symptoms and higher quality of life when they had more emotional support (Ross et al., 2015).

**Current Study.** The current study was conducted using a cross sectional correlational design. The design was selected based on the nature and the stated study purpose. Correlational designs are used to determine the extent to which a relationship exists between two or more variables (Huller, et al., 2013). This design was appropriate to test the study hypotheses where the predictive relationship between the independent variables (IPV, perceived social support, QOL, parenthood status, partnership status and employment status) and the dependent variable
Running Head: PSYCHOSOCIAL DETERMINANTS OF SUICIDAL IDEATION

(suicidal ideation) were examined. The mentioned independent variables were selected to be included in the current study because these variables are recognized as strong risk factors for suicidal ideation in different populations in Eastern and Western countries, highly prevalent among women from Southeast Asia including Thai women, and based on the available data (Chen, 2012, Devrise, et al., 2011; Harder, et al., 2012; Kazmi, et al., 2015; Legelye, et al., 2010, & Ross, et al., 2015). Although causal conclusions cannot be drawn using a cross sectional correlational design, it allows researchers to analyze the relationship among large numbers of variables. Further, it allows determining the strength and direction of a relationship between the study variables, which in turn enhances the understanding of the suicidal ideation phenomenon (Huller, et al., 2013; Polit, 2011). Results from this study can help nurses and other health care professionals identify important factors related to suicidal ideation that can lead to interventions appropriate for the Thai cultural context to prevent suicidal ideation among women in Thailand.

Table 3.1. Comparison Between the Parent and Current Study

<table>
<thead>
<tr>
<th>Purpose(s)</th>
<th>Parent Study (Ross et al., 2015)</th>
<th>Current Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose(s)</td>
<td>Identify the predictors of IPV, the association between IPV and health outcome, and the mediating effect of social support between IPV and health outcome in Thai adult women</td>
<td>To examine whether IPV, social support, QOL, employment status, parenthood status, and/or parenthood status predict suicidal ideation in Thai adult women</td>
</tr>
<tr>
<td>Variables</td>
<td>Independent variables: Pregnancy status, family income, Husband’s drug use, husband’s alcohol use, and husbands’ gambling.</td>
<td>Independent variables: IPV, social support, QOL, employment status, parenthood status, and/or partnership status.</td>
</tr>
</tbody>
</table>
Sample

The target population consists of Thai adult women. In the parent study, the researchers recruited a sample of 284 participants from a large hospital in Northeast Thailand using the convenience-sampling method (Ross et al., 2015). The use of a convenience sample from one setting could limit the ability to generalize the study findings across the target population and setting. Nonetheless, the size of the selected setting and the potential diversity of geographical and socioeconomic backgrounds among women receiving care at this hospital should maximize the external validity of the study, and thus enhance the generalizability of the study findings. Moreover, selecting subjects from one setting helps improve internal validity by decreasing the undesirable effects of extraneous variables (Polit, 2011).

In the parent study, the researchers selected participants based on their 1) age (≥18 years old), 2) gender (female), 3) ability to write and read in Thai, 4) and receiving care at the hospital at OB/GYN units (Ross et al., 2015). The current study adopted the parent study’s inclusion criteria.
Sample Size

Sample size was calculated using G* Power software 3.1, a priori power analysis of Z tests – Two tails logistic regression (Faul, Erdfelder, Lang, & Buchner, 2009). Setting effect size at .15, power at 0.8, default alpha at .05, and effect size at .15, a sample size of 284 and a power average of 0.8 of this study were generated (see figure 3.1).

**Figure 3.1. Priori power analysis of Z tests–logistic regression**

Instruments

Self-reporting, back-translated Thai instruments were used in the parent study to assess the dependent and independent variables (Ross et al., 2015). The use of self-reporting instruments can increase the likelihood of producing response bias, resulting in limited internal validity (Cook, 2010). Still, the self-reported measures used in the study have been used widely in previous studies and they have been found to be reliable and valid measures. In addition, the
participants in the parent study were encouraged to respond truthfully to the survey items. They completed the surveys privately and were informed that the surveys would not be linked to them personally in any way (Ross, et al., 2015).

**Demographic variables.** In the parent study, several demographic variables were assessed by questions included in the demographic questionnaire (see Appendix-A) (Ross, et al., 2015). Employment status, parenthood status, and partnership status were included in the current study as independent variables (See Appendix-B).

**Perceived social support.** Perceived social support is theoretically defined as one’s perception about the extent to which she is cared for, feels loved, and is understood by her family, friends, and spouse (Kleiman & Liu, 2013). The definition of perceived social support used in the parent study included three dimensions involving support provided by family, friends, and spouse (Ross, et al., 2015). To be consistent with the theoretical definition of perceived social support, the 12-item, multi-dimensional scale of perceived social support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988) was used to measure Thai Woman’s perception of social support (see Appendix C-1). This scale likewise measures perceived social support received from family, friends, and significant others. The MSPSS consists of 12-items rated on a 7-point Likert-type scale, ranging from 1, “very strongly disagree,” to 7, “very strongly agree.” The scale is divided into three subscales: family, friends, and spouse, with each subscale consisting of four items. Item ratings fall between 12 and 84, with higher scores indicating higher levels of perceived social support. In Thai women, the internal consistency reliability of the Thai version of this scale was supported with Chronbach’s alphas of .89 for family subscale, .93 for friend, and .89 for spouse (Ross, et al., 2015). The construct validity for this scale has been supported in Southeast Asian populations. It related inversely to measures of
psychiatric distress and depression (Akhtar et al., 2010).

**Intimate partner violence.** IPV is theoretically defined as any abusive or threatening physical, sexual, or psychological act against a woman as inflicted by her spouse (Modallal, et al., 2012). In the parent study, the concept of IPV involved three forms of violence to which abusive women can report, including physical, sexual, or psychological violence (Ross et al., 2015). Physical and sexual violence forms were measured by the Severity of Violence Against Women Scale (SVAWS) (Marshall, 1992) (see Appendix C-2), while the psychological violence was measured by the Psychological Maltreatment of Women Inventory (PMWI) (Tolman, 1989) (see Appendix C-3).

The SVAWS includes 40 items; six items used to evaluate sexual violence and 34 items to evaluate physical violence. The 40 items are rated on a four-point Likert-type scale, ranging from 1, “never,” to 4, “many times.” The range of the total score for the sexual violence subscale is between 4 and 24, with higher scores indicating higher levels of sexual violence. The range of the total score for physical violence is between 4 and 136, with higher scores indicating higher levels of physical violence. Among Thai women, the Chronbach’s alphas for sexual violence and physical violence subscales were .84, and .96, respectively, supporting internal consistency reliability (Ross, et al., 2015). The SVAWS is also found to have content and construct validity (Marshall, 1992).

The PMWI includes 14 items scored on a 5-likert scale, ranging from 1, “never,” to 5, “very frequently.” The total score range of this scale is between 14 and 70, with higher scores suggesting higher levels of psychological violence. In Thai women, the scale displayed good internal consistency reliability, with a Cronbach’s alpha of .90 (Ross, et al., 2015).

**Quality of life.** According to WHO (1996), quality of life is defined as “the individual’s
perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns” (WHO, 1996. p.5). It is a broad construct influenced by the person’s physical health, psychological state, and social relationships as well as the person’s relationship to the silent characteristics of his or her environment (WHO, 1996). The short version of the World Health Organization Quality of Life (WHOQOL-BREF) (WHO, 2004) developed cross-culturally was used to assess the quality of life of the participants (see Appendix C-4) (Ross et al., 2015). The WHOQOL-BREF comprises of 26 items, with 24 of these items are grouped into three domains (Physical health, Social relationships, and Environment), with two individual items assessing the perception of overall QOL and general health. The 26 items are rated on a 5-point Likert-type scale, ranging from 1, “very dissatisfied,” to 5, “very satisfied.” Total scores range between 26 and 130, with higher scores indicating higher level of QOL. This instrument has good reliability and construct validity in Thai women. The WHOQOL-BREF/Thai convergent validity was supported as it inversely correlated with the Thai Depression Inventory (Lotrakul & Sukanich, 1999). Good discriminant validity was also shown ($p < .001$), as demonstrated by significant differences in QOL scores between women who experienced different degrees of IPV: no IPV, one type of IPV, two types to IPV, and all three types of IPV. The Chronbach’s alpha value for WHOQOL-BREF/Thai was .87, supporting the internal consistency reliability (Ross, Shahrou, Stidham, & Delahanty, 2017).

**Suicidal ideation.** Suicidal ideation refers to the “desire” to die or the “desire” to engage in lethal behaviors (Joiner, 2005; Van Orden, et al., 2010). Suicide ideation was measured by one item (#19) derived from Thai Depression Inventory Scale (Lotrakul, Sukanicg, 1999) (see Appendix C-5). The derived item has four options include: a) planning to commit suicide, b)
wanting to die, c) life is not pleasant. Think about own death often but do not want to die, and d) not thinking about death. In the current study, the responses were classified into two categories (having suicidal ideations v/s having no suicidal ideations) based on IPSB theory. According to IPSB theory, choosing the option of “a”, “b” or “c” indicates having suicidal ideation whereas choosing the option of “d” indicates having no suicidal ideation. A code of 1 was assigned for “having suicidal ideations” whereas a code of 0 was assigned for “having no suicidal ideations”.

Several studies have successfully used a single item to assess suicidal ideation and the use of such item has been found to be a valid measure for suicidal ideation in different populations (Ali, et al., 2013; Chikezie, et al., 2012; Dalglish, et al., 2015; Desseilles, et al., 2012; Falb, et al., 2013; Gassman-Pines, et al., 2014; 2015Leiner, et al., 2008; Ogundipe et al., Weaver, et al., 2007).

**Data Collection**

The data collection took place in 2010 at a large hospital in Northeast Thailand after receiving approval from the IRB from the hospital in Thailand and Kent State University in the U.S. Data collection occurred using the above instruments. Before data collection, the PI of the parent study trained data collectors, who were registered nurses, to ensure 1) data consistency and 2) that nurses can deal with participants who experience emotional distress during data collection. Verbal informed consent was obtained instead of oral consent in order to protect participants from potential later harm from their respective spouses. Participants who agreed to participate received the study instrument packet to be filled out in a private room at the hospital (Ross et al., 2015).

**Data Analysis**

**Data Management.** The analysis plan began by assessing the data for missing values and
outliers. Missing values were assessed using frequency distribution. Box plots and Mahalanobis
and Cook’s distances were used to identify univariate and multivariate outliers, respectively. The
logistic regression test assumptions including normality and absence of multicollinearity were
examined for violations. Calculations of item convergent validity were used to assess whether
the (#19) item derived from Thai Depression Inventory Scale had adequate validity
to measure the dependent variable (suicidal ideation).

**Statistical analysis.** Statistical analysis was conducted using SPSS software (version 23).
Descriptive statistics was used to describe the sample. The sample and variables were described
by measures of central tendency and dispersion appropriate to the level of measurement. For
example, means and standard deviations were calculated for demographic variables on interval
level (e.g., age). Frequency was calculated for categorical variables such as partnership status
and employment status.

To predict a categorical dependent variable by one or more continuous or categorical
independent variables, both discriminant analysis and logistic regression can be used. However,
discriminant analysis assumes normal distribution of independent variables in the model. Since
both continuous and categorical variables are used in the current study, the normality assumption
will not be met. Thus, logistic regression was selected as the appropriate statistical test to test the
study hypotheses (Polit, 2011).

Prior conducting logistic regression, bivariate correlations analysis was used as a
preliminary step to assess the potential correlation between the independent variables and the
outcome. The findings of bivariate correlational analysis provided some idea what to expect as
far as the strength of the prediction model that was generated using logistic regression.

**Ethical Considerations**
IRB approvals from the hospital in Thailand and Kent State University in the US were obtained in the parent study (Ross et al., 2015). For the current study, the IRB approval was obtained from the Institutional Review Boards at Kent State University.

The three ethical principles that were applied in the parent study included respect for persons, justice, and confidentiality. In the parent study, for protecting the principle of respect for persons, the participants were informed about the nature and objectives of the study, and their possibility not to respond to any question in the used instruments. Oral informed consent was obtained from the participants to participate in the study (Ross et al., 2015).

For maintaining justice, no one of the Thai adult women visiting the hospital was excluded based on her race or religion. Confidentiality was achieved by collecting study’s data anonymously, where coded IDs were created to use for data collection and analysis. The study’ data was protected from unauthorized access and it is stored in password-secured computer files (Ross et al., 2015)
CHAPTER 4

Results

The findings of the current study are reported in four sections. The first section presents data screening results. This includes screening for missing values, univariate and multivariate outliers, normality, and multicollinearity. The convergent validity analysis of the suicidal ideation item used in the current study is then presented. In the second section, the participants' characteristics are analyzed. The third section presents the results of bivariate analyses. The fourth section analyzes the hypotheses of the study.

Data Screening and Cleaning

A graphical and statistical review of the data was conducted to assess the presence of any outliers or missing data as well as to confirm that statistical assumptions such as normality and absence of multicollinearity were met.

Missing Data. The data was screened for missing values using the FREQUENCIES option in SPSS. No missing values were identified for each variable in the current study.

Outliers. Univariate outliers were identified through box plots. Number of univariate outliers was identified for some variables. Three outliers were identified on QOL (see Figure 4.1) where six outliers were identified on social support variable (see Figure 4.2). Then, the data was screened for existing multivariate outliers. Four multivariate outliers were identified using Cooks’ distance and Mehalonobis distance criteria. Cases with a cook’s distance of 1 and more and MD’s probability of .001 and less were considered as outliers (Steven, 1984). These outliers were considered as legitimate values because the identified participants with these outlier values did not vary on any demographic variables from the majority of participants and scored within the normal ranges of possible scores for all variables included in the analysis. Moreover,
according to Wiggins (2000), it is normal to have about 5% outliers in dataset. However, Hoaglin & Welsch (1978) recommended that researchers should determine if the identified outliers are damaging to the regression equation by running analysis with and without the outliers and comparing any changes in the results on the two runs. Accordingly, for multivariate analyses, two binary logistic regression tests, with and without the identified outliers, were run to confirm that these outliers did not affect the results.

**Figure 4.1. Outliers on Quality of Life**
**Figure 4.2. Outliers on Social Support**

Normality. The continuous variables such as quality of life, perceived social support, IPV, and age were screened for univariate normality using measures of skewness, kurtosis, Kolmogorov-Smirnov, and Shapiro-Wilk statistics. These measures showed that these continuous variables were not normally distributed (see Table 4.1) even after transformation. Binary logistic regression is robust to violation to normality and thus logistic regression was used to test the study hypotheses.
Table 4.1. Tests of Normality

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov$^a$</th>
<th>Shapiro-Wilk</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic  df  Sig.</td>
<td>Statistic  df  Sig.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QOL</td>
<td>.054  284  .048</td>
<td>.989  284  .026</td>
<td>.072</td>
<td>.573</td>
</tr>
<tr>
<td>Social Support</td>
<td>.088  284  .000</td>
<td>.930  284  .000</td>
<td>-1.051</td>
<td>1.656</td>
</tr>
<tr>
<td>Combined IPV</td>
<td>.243  284  .000</td>
<td>.869  284  .000</td>
<td>-.315</td>
<td>-.673</td>
</tr>
</tbody>
</table>

* QOL: quality of life. IPV: intimate partner violence

**Multicollinearity.** The multicollinearity between predictors was assessed using VIF and tolerance values. Multicollinearity between predictors was not existing as the tolerance values fell between .752 and .995 (> .1) and VIF values fell between 1.005 and 1.33 (< 10).

**Convergent Validity.** Several theories suggest that suicidal ideation would be positively related to depression. Thus, the convergent validity of the suicidal ideation item used in the current study was assessed by examining the association between this item and the Thai Depression Inventory (Lotrakul, Sukanicg, 1999). In order to reduce conceptual overlap between these two variables, the item 19 assessing suicidal ideation was removed from the Thai Depression Inventory (Lotrakul, Sukanicg, 1999). The findings showed that suicidal ideation was positively associated with depression with a correlation coefficient of 0.37 (p < .001), supporting the convergent validity of this item.

**Demographic Characteristics of the Sample**

Descriptive statistics for the outcome and independent variables are presented in Table 4.2. For the dependent variable, a small percent of the Thai women in this sample (8%) reported suicidal ideation. For independent variables, the majority identified themselves as employed
(93%), partnered (95.4%), and had at least one child (88%). Regarding quality of life, the participants in this sample enjoyed a high quality of life with a mean score reached 97.86. The scores of perceived social support ranged from 12 to 84, with a high mean score (63.87), meaning that the study participants perceived high social support from their friends, spouses, and families. The participants were likely to experience IPV with a mean of 1.76 (standardized scores range of 0 to 3).

Other demographic variables were reported to provide a more detailed description of the sample such as age and income levels. The sample was mainly consisting of young adults, with a mean score of 36, ranging from 18 to 58 years old. Nearly third of the study participants earning high income, ranged between 9001 and 20000 Baht.

**Table 4.2.** Demographic characteristics (N=284)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Categorical Variables</th>
<th>Continuous Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suicidal Ideation</td>
<td>Yes</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>262</td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td>Yes</td>
<td>265</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>19</td>
</tr>
<tr>
<td>Partnership</td>
<td>Yes</td>
<td>271</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>13</td>
</tr>
<tr>
<td>Parenthood</td>
<td>Yes</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>34</td>
</tr>
<tr>
<td>QOL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Both Chi-square tests and t-tests can be used to examine the association between two variables (Polit, 2010). T-tests assume normally distributed data. As mentioned above, the continuous variables such as quality of life, perceived social support, IPV and age were not normally distributed. Thus, non-parametric statistical tests, chi-square tests, were used instead of t-tests to examine whether the predictors (employment status, partnership status, parenthood status, quality of life, perceived social support, IPV, family income level, and age) were significantly correlated with suicidal ideation. The data of the continuous variables (quality of life, perceived social support, IPV, and age) were categorized to run Chi-square tests. Age variable was categorized into six categories whereas each of quality of life and perceived social support variables were categorized into four categories (See Table 4.3). The number of the categories for each of quality of life and perceived social support variables was chosen based on the data. According to (Thomas, Silverman, & Nelson, 2015), twenty percent of the contingency
cells should have expected frequencies of more than 5. To calculate the class interval/size for each category, the lowest value of each variable in the dataset was subtracted from the highest value and then divided by the number of the categories (Harris, 2000). IPV variable was categorized into four categories including no violence, one type of violence, two types of violence, and three types of violence. The categories were generated based on how many types of violence (physical, emotional, and sexual) participants experienced. For example, participants who experienced only physical, sexual, or emotional violence were included in the second category that was labeled as “1 type of violence”. Participants who experienced two types of violence (physical and emotional, physical and sexual, or emotional and sexual violence) were included in the third category, which was labeled as “2 types of violence” (Ross, et al., 2015).

Table. 4.3. Continuous Variables Categorizing and Coding

<table>
<thead>
<tr>
<th>Variable</th>
<th>Categories</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of life</td>
<td>56-74</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>75-93</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>94-112</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>112-128</td>
<td>4</td>
</tr>
<tr>
<td>Social support</td>
<td>12-30</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>31-49</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>50-68</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>69-87</td>
<td>4</td>
</tr>
<tr>
<td>IPV</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The chi-square tests results are presented in Table 4.4. The findings showed that only quality of life was significantly correlated with suicidal ideation ($\chi^2 (4, N = 284) = 11.76, p < .05$). However, perceived social support ($\chi^2 (3, N = 284) = 1.29, p > .05$), IPV ($\chi^2 (3, N = 284) = 3.83, p > .05$), partnership status ($\chi^2 (1, N = 284) = .000, p > .05$), employment status ($\chi^2 (1, N = 284) = .22, p > .05$), and parenthood status ($\chi^2 (1, N = 284) = 1.25, p > .05$) were not significantly correlated with suicidal ideation.

The relationships between suicidal ideation and other demographic variables such as age and family income, not included in the study model, were examined to confirm that these variables did not affect the main results. The chi-square tests showed that age ($\chi^2 (5, N = 284) = 5.84, p > .05$) and family income level ($\chi^2 (5, N = 284) = 4.844, p > .05$) were not significantly correlated with suicidal ideation.
Study Hypotheses Testing

A single binary logistic regression was conducted to assess both of the study hypotheses simultaneously. Four multivariate outliers were identified, two binary logistic regression tests with and without the identified outliers, were run to confirm that these outliers did not affect the results.

**Binary Logistic Regression with Outliers.** The results showed that a test of the full model versus a null model with intercept only was statistically significant ($\chi^2 (6, N = 284) = 18.112, p < .01$) (see Table 4.5), rejecting the null hypothesis that the coefficients for all the independent variables equal zero. Using the Nagelkerke's $R^2$, the full model explains roughly 15% of the variation in the outcome (see Table 4.6). The overall accuracy of this model to predict

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pearson Chi-Square Value ($\chi^2$)</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of life</td>
<td>11.76</td>
<td>4</td>
<td>.019*</td>
</tr>
<tr>
<td>Social support</td>
<td>1.29</td>
<td>3</td>
<td>.730</td>
</tr>
<tr>
<td>IPV</td>
<td>3.83</td>
<td>3</td>
<td>.281</td>
</tr>
<tr>
<td>Age</td>
<td>5.84</td>
<td>5</td>
<td>.323</td>
</tr>
<tr>
<td>Partnership Status</td>
<td>.000</td>
<td>1</td>
<td>.994</td>
</tr>
<tr>
<td>Employment Status</td>
<td>.22</td>
<td>1</td>
<td>.639</td>
</tr>
<tr>
<td>Parenthood Status</td>
<td>1.25</td>
<td>1</td>
<td>.264</td>
</tr>
<tr>
<td>Family Income</td>
<td>4.844</td>
<td>5</td>
<td>.435</td>
</tr>
</tbody>
</table>

*p < .05  SI: Suicidal ideation. IPV: Intimate partner violence

**Table 4.4.** Bivariate Correlations between predictor variables and suicidal ideation (Chi-square test results)
subjects having suicidal ideation (with a predicted probability of 0.5 or greater) is 92.3% (see Table 4.7). The sensitivity (ability to classify those with suicidal ideation) is given by $1/22 = 4.5\%$ and the specificity (ability to classify those without suicidal ideation) is $261/262 = 99.6\%$. Positive predictive value (PPV) = $1/2 = 50\%$ and negative predictive value (NPV) = $261/282 = 92.5\%$. The Hosmer-Lemeshow test indicated that predictions made by the model fit well with observed group memberships ($\chi^2 (8, N= 284) = .499, p > .05$) (See table 4.8).

**Table 4.5. Omnibus Tests of Model Coefficients**

<table>
<thead>
<tr>
<th></th>
<th>Chi-square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step</td>
<td>18.112</td>
<td>6</td>
<td>.006</td>
</tr>
<tr>
<td>Block</td>
<td>12.112</td>
<td>6</td>
<td>.006</td>
</tr>
<tr>
<td>Model</td>
<td>18.112</td>
<td>6</td>
<td>.006*</td>
</tr>
</tbody>
</table>

*p < .05

**Table 4.6. Model Summary**

<table>
<thead>
<tr>
<th>Step</th>
<th>-2 Log likelihood</th>
<th>Cox &amp; Snell R Square</th>
<th>Nagelkerke's R $^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18.112</td>
<td>.62</td>
<td>.15</td>
</tr>
</tbody>
</table>

**Table 4.7. Model Discrimination**

<table>
<thead>
<tr>
<th>Observed</th>
<th>Predicted</th>
<th>Percentage Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>SI</td>
<td>Percentage Correct</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.8. Hosmer and Lemeshow Test

<table>
<thead>
<tr>
<th>Step</th>
<th>Chi-Square</th>
<th>df</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.99</td>
<td>8</td>
<td>.758</td>
</tr>
</tbody>
</table>

Table 4.9 shows the logistic regression coefficient, Wald test, and odds ratio for each of the predictors. Employing a .05 criterion of statistical significance, findings revealed that quality of life only had a significant partial effect (Wald= 12.77, df= 1, P < .001), partially supporting the first hypothesis while completely supporting the second one. IPV (Wald= .765, df=1, P > .05), perceived social support (Wald= 2.88, df=1, p > .05), partnership status (Wald= .016, df= 1, p> .05, parenthood status (Wald= .802, df= 1, P > .05), and employment status (Wald= .199, df= 1, P > .05) had not significant partial effects. Exp (B) value indicated also that when quality of life is raised by one point, the odds of having suicidal ideation decreases by 9% (95% CI 87% to 96%). This 9% is obtained by taking Exp(B) for QOL – 1 (Chan, 2004).
Table 4.9. Binary logistic regression results including outliers (Dependent variable: suicidal ideation)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>Wald</th>
<th>P-value</th>
<th>Exp(B)</th>
<th>95% C.I. for Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>Employment</td>
<td>.37</td>
<td>.199</td>
<td>.655</td>
<td>1.44</td>
<td>.290</td>
</tr>
<tr>
<td>Partnership</td>
<td>.14</td>
<td>.016</td>
<td>.90</td>
<td>1.15</td>
<td>.132</td>
</tr>
<tr>
<td>Parenthood</td>
<td>-.94</td>
<td>.802</td>
<td>.37</td>
<td>.39</td>
<td>.049</td>
</tr>
<tr>
<td>QOL</td>
<td>-.09</td>
<td>12.77</td>
<td>.00*</td>
<td>.91</td>
<td>.870</td>
</tr>
<tr>
<td>Social Support</td>
<td>.04</td>
<td>2.88</td>
<td>.09</td>
<td>1.04</td>
<td>.995</td>
</tr>
<tr>
<td>Combined IPV</td>
<td>-.25</td>
<td>.765</td>
<td>.38</td>
<td>.78</td>
<td>.439</td>
</tr>
</tbody>
</table>

Model Chi-Square (P-value) 18.11(.006)*

% Correct Prediction 92.3 %.

Nagelkerke's R² .15

*p < .05

Binary Logistic Regression without Outliers. Prior to assessing the results of the binary logistic regression analysis excluding outliers from the analysis, the multicollinearity between predictors was assessed using VIF and tolerance values again. Multicollinearity was not present as the tolerance values fell between .749 and .995 (> .1) and VIF values fell between 1.005 and 1.336 (< 10).

The results showed that a test of the full model against the null model with intercept only
remained statistically significant, $\chi^2 (6, N = 280) = 21.951$, $p < .01$. Using the Nagelkerke's $R^2$, the full model explains roughly the 20% of the variation in the outcome. The full model (the model with all predictors) was correctly able to classify 99.6% of those without suicidal ideation and 5.6% of those with suicidal ideation, for an overall success rate of 93.6%, which was roughly similar to the full model including the outliers. The Hosmer-Lemeshow test indicated that predictions made by the model fit well with observed group memberships ($\chi^2 (8, N = 280) = 7.30$, $p > .05$).

Wald criterion showed results nearly similar to the results with the inclusion of multivariate outliers. For example, quality of life only had a significant, partial, and negative effect on suicidal ideation ($\text{Wald}= 13.928$, $\text{df}= 1$, $P < .001$), but the other predictors did not have any significant contributions for prediction. $\text{Exp(B)}$ value indicates that when quality of life is raised by one point, the odds of having suicidal ideation decreases by 9%.
Results Summary

The current study sought to analyze the association between psychosocial factors including IPV, social support, employment status, parenthood status, partnership status, and quality of life (QOL) and suicidal ideation in a sample of Thai women. This is particularly important as research examining suicidal ideation in Southeast Asian adults continues to be scant. The study tested two hypotheses. The first hypothesis, which stated that suicidal ideation is predicted by IPV, social support, employment status, parenthood status, partnership status, and/or quality of life (QOL) gathered partial support. Even though these predictors as set were statistically related with suicidal ideation, the bivariate analyses showed that quality of life was the only variable correlated with suicidal ideation. The second hypothesis, which stated that quality of life would be the strongest predictor, was supported by the study results. Quality of life was the only predictor in the model that negatively affected suicidal ideation with an OR of .91.

Discussion of Results

Quality of Life. Our findings provided partial support for Joiner’s (2005) Interpersonal Theory of Suicide Behavior. Among all the predictors included in the study model, quality of life appeared to be uniquely associated with suicidal ideation. High levels of quality of life correlated with lower odds of reporting suicidal ideation, supporting the Interpersonal Theory of Suicide Behavior, which states that poor quality of life results in higher possibility of having suicidal ideation and vice versa. The findings in this study remained consistent with previous research that revealed a significant and strong association between QOL and suicidal ideation. For example, Lossnitzer et al. (2009) found that negative association between suicidal ideation and physical and mental components of health-related
quality of life in American patients with congestive heart failure. In another study conducted in the United States, Algorta, et al., (2011) revealed that lower levels of QOL was associated with higher levels of suicidal ideation in youth aged between 5 and 18 years with bipolar disorder. In Spain, Triñanes, et al. (2015) found that patients with fibromyalgia who had suicidal ideation reported higher interferences of their disease in daily activities and lower levels of physical and emotional components of quality of life. Kim and Kim (2015) examined QOL in relation to suicidal ideation in Korean patients with COPD and found that suicidal ideation was negatively associated with QOL in male and female patients. In Australia, Fairweather-Schmidt et al. (2016) conducted a longitudinal study to examine the effects of poor mental and/or physical health-related quality of life on suicidal ideation over eight years in a community-based adult population. They found that poorer mental and physical components of QOL associated with higher odds of suicidal ideation.

These findings support the interpersonal theory of suicidal behaviors that proposes that poor quality of life increases suicidal ideation. This effect may occur through a variety of mechanisms. For example, poor mental and physical functioning can evoke a feeling like being a burden on others (perceived burdensomeness), but poor social functioning is associated with decreased social connections, greater isolation and loneliness, and inadequate ability to integrate with desired social groups (thwarted belongingness). As noted above, poor quality of life can increase both perceived burdensomeness and thwarted belongingness, essential interpersonal constructs for evoking suicidal ideation. Because of its relations with both constructs (perceived burdensomeness and thwarted belongingness), poor QOL was found to be the strongest predictor of suicidal ideation among other predictors, only related to one of the both constructs (Joiner, 2005).

**Intimate Partner Violence.** Contrary to the current study hypothesis as well as Interpersonal Theory of Suicide Behavior, IPV was not significantly associated with a greater likelihood of having
suicidal ideation among Thai women. These findings were also inconsistent with previous research. For example, Weaver, et al. (2007) found that sexual and physical IPV were significantly associated with suicidal ideation in a shelter sample of American battered women. Leiner et al. (2008) reported that psychological or physical IPV was significantly associated with increased suicidal ideation in African American women. In Jordan, Hamdan-Mansour et al. (2012) found that psychological abuse was associated with suicidal ideation among adult women. In Chinese women living in rural areas (N = 1522), Gao and Jacka (2012) reported that women who had suffered physical abuse were more likely to report suicidal ideation. In refugee women along the Thailand–Burma border (N = 848), Falb et al. (2013) reported that 26.7% of those women who experienced IPV reported suicide ideation; however, only 5% of those women who did not experience IPV reported suicidal ideation. In Pakistan, Ali et al. (2013) found that suicidal ideation was reported by 75.8%, 74.1%, and 65.3% of the married women exposed to sexual, physical, and psychological violence, respectively. Similarly, Yang et al. (2006) found that aboriginal women in Taiwan who experienced partner physical and sexual abuse were more likely to report suicidal ideation.

The discrepancy between the findings of current study and previous studies regarding the association between IPV and suicidal ideation could be attributable to differences in population, sampling, and possible reporting bias or cultural stigma. For example, the negative effects of IPV on mental health, including suicidal behaviors, might have been inhibited due to patriarchal norms and traditions sanctioning and justifying IPV in Thailand, thus resulting in a greater tolerance for IPV among Thai women than other populations. Further, such non-significant results in current study can also be attributed to the potential underreporting of IPV and suicidal ideation. Thai women may not have reported IPV because they culturally consider IPV as a private issue and family matter. There is often fear of what might happen if they had reported it, both in relation to their partners and the authorities.
Suicidal ideation is still stigmatized in Thailand, potentially leading to the underreporting of suicidal ideation (Chen, Chien-Chang Wu, Yousuf, & Yip, 2011). The prevalence of suicidal ideation in the current study was less than the prevalence of suicidal ideation in another study using Thai women (8% vs. 22%), being potential evidence of underreporting suicidal ideation in the current study. A possible methodological explanation for such non-significant results was the use of a convenience sampling method that could have created a biased sample including participants who have not reflected or been representative to the study population in terms of the prevalence of suicidal ideation and IPV. Finally, there might have been other factors that were not controlled but negatively affected the results such as religiosity. Religiosity has been found to attenuate the negative effects of stressors such as IPV on suicidal ideation (Chen et al., 2011; García, Páez, Reyes-Reyes, & Álvarez, 2017; Güngörmüş, Tanrıverdi, & Gündoğan, 2015; & Kaslow, et al., 2002). Finally, non-significant results of the current study could be explained by the uses of two different scales for measuring IPV. The scores of these different scales were combined and categorized. This technique could result in restricted range on a measure, increasing the possibility of type 2 error.

Social Support. Perceived social support was examined as another protective factor against suicidal ideation in the current study. In sum, perceived social support did not significantly predict suicidal ideation. The current findings were not in line with the findings from previous studies that found significant and negative associations between perceived social support and suicidal ideation in various populations (Aiba, et al., 2011; Chen, et al., 2012; Lincoln, et al., 2012; & Park, et al., 2010). Potential explanations for the non-significant association between perceived social support and suicidal ideation in the current study can be attributed to many factors. First, it has been reported in literature that Asians do not usually ask for social support in dealing or coping with stress (Kim, et al., 2006 & Taylor et al., 2004). There are at least three possible reasons for not using social support in Asian culture. First,
there is a belief in Asian cultures that one should not have to ask for support because other close individuals should anticipate her needs for support and provide it before support is explicitly asked. Second, Asians have a strong belief that a personal problem should be solved independently because each person should be responsible for his or her own problems without seeking helps from others. Third, Asians are more concerned about the potentially adverse relational consequences of seeking support from others, such as disrupting group harmony or receiving criticism from others. Thus, they likely do not disclose their distress or seek support from others to avoid these negative relational consequences (Kim, 2008). Another explanation could be that all of the participants in the current study were adults (18 or older). Being an adult involves increasing a perception of independence and taking responsibility for person’s own life issues. According to Jackson, Tucker, & Herman (2007), level of perceived social support decreased as age and perception of independence increased.

Additionally, possible methodological issues exist that could have affected the results. Thai women have been found to use several ineffective coping strategies to deal with their stressors, in addition to social support. Examples of these coping strategies are uses of alcohol or drugs found to be risk factors for suicidal ideation in other populations (Chen et al., 2011). Such factors, in addition to other unknown factors not measured in the current study, might have undesirably affected the relationship between social support and suicidal ideation. Another possible explanation for the non-significant results is the use of MSPSS. There are some methodological issues affecting the validity of this instrument. For example, the MSPSS was designed to assess perceptions of social support adequacy from three specific sources, namely family, friends, and significant others. There could be additional sources of support used by Thai women that were not measured by this instrument (e.g., co-workers and pets) (Zimet, Dahlem, Zimet, & Farley, 1988).

**Employment Status.** In the current study, the hypothesis held that unemployed women are more
likely to report suicidal ideation, but the results showed no significant relationship. These results did not support the interpersonal theory of suicidal ideation and were not consistent with most previous studies that found a significant and positive relationship between unemployment and suicidal ideation (Andrijić, et al., 2014; Chikezie, et al., 2012; Dalglish et al., 2015; Gassman-Pines, et al., 2014; Hintikka, et al., 2009; Hiswåls, et al., 2015; and Ogundipe, et al., 2015). Notably, most of these previous studies were conducted in Western countries where unemployed women are probably more likely to report suicidal ideation than unemployed women in Asian countries.

Chen (2012) explained that there is a gender variation regarding risk factors for suicidal behaviors in Asian countries. For example, life stresses such as job loss, gambling, and work-related factors are important risk factors of suicidal behaviors among Asian men, whereas family conflicts are essential risk factors for Asian women. This can be interpreted that men are the head of the household in a traditional Thai family and they are usually the breadwinner and managing important financial responsibilities (Ross & Ross, 2012). Thus, the psychological effects of unemployment or loss of job on women are minimal. Moreover, about third of the study participants were elders. In Thailand, respect for seniors is crucial in Thai culture. When Thai elders in their family become too old to take care of themselves, their younger members are morally required to care for them, even financially (Ross & Ross, 2012). Given that elders can often be financially dependent on their youngers, being unemployed might not have significant negative psychological effects on such people.

Van Orden et al. (2010) argued that unemployment is associated with elevated risk for suicidal behaviors, but only among vulnerable populations such as patients with chronic mental or physical illnesses, or only when it leads to certain negative outcomes such as home foreclosures. In the current study, these variables were not measured and their interaction effects with unemployment status on
suicidal ideation were not examined and unknown. Including these variables and evaluating their interaction effects with employment status could have changed the results regarding employment status.

**Partnership and Parenthood Status.** According to the Interpersonal Theory of Suicidal Behaviors, the “need to belong” is a fundamental human psychological need. Two facets comprise the need to belong: “people seem to need frequent, affectively pleasant or positive interactions with the same individuals, and they need these interactions to occur in a framework of long-term, stable caring and concern” (Baumeister & Leary, 1995, p. 520). When this psychological need is unmet- a state described as thwarted belongingness- a desire for death develops. Important observable indicators of thwarted belongingness are not having children or loss of a partner through divorce or death. Numerous previous studies have demonstrated associations between suicidal ideation and various facets of thwarted belongingness, including losing a spouse through death or divorce and not having children. In contrast, having a partner or children have been associated with decreased risk for suicidal ideation (Da Silva, et al.; 2012; Fekadu, et al., 2014; Forkmann, et al., 2012; Shin, et al., 2015); Huang, et al.; 2012; Huiwen, et al.; 2015; Newport et al., 2007; O’Connor, et al., 2014; Shin, et al., 2015; Violanti et al., 2009; & Zhang & Zhou, 2011). But in the current study, the results were not in line with the interpersonal theory of suicidal behaviors and these previous studies demonstrating association between suicidal ideation and these two variables (parenthood status and partnership status).

This result can be explained by the nature of relationships in Thai society. Unlike Western countries, male and female adult children in East Asian countries are not expected to leave the parental nuclear family upon reaching adulthood, regardless of marital status (as is the case in most Western settings) (Huang, 2012). The general norm is for adult children, particularly female adults, to stay with parents when they get divorced or lose their partners through death. Also, it is not uncommon for a single, divorced, or widowed Thai women to live with her sibling(s), cousin(s), aunt(s), uncle(s),
grandparent(s), or parent(s). Within this arrangement, females tend to be socially integrated into the extended or parental family in the form of great communication and involvement with ongoing family-centered agendas, such as children of married siblings, as well as nurturing social networks with other relatives and cultural festivals and events. Particularly among older women, either never married or widowed, involvement with raising their siblings or grandchildren tends to maintain emotional linkages that could protect against drastic decisions like suicide (Ross & Ross, 2012).

Additionally, a friendship between two individuals who are not biologically related can often evolve into a family-like relationship in Thailand. Based on their ages, a Thai could become like a brother, a sister, an aunt, an uncle, a parent, or a grandparent to a friend (Ross & Ross, 2012). In our context, a Thai woman who lives alone without children, particularly elders, might form a family-like relationship with a friend and become like her child, protecting her against the experience of thwarted belongingness and suicide.

Methodologically, the inconsistent results between the current study and previous studies regarding the relationship between suicidal ideation and parenthood status as well as partnership status are potentially explained by methodological limitations in the use of different criteria as indicators of these two variables. For example, in the current study, the question about partnership status did not include the option of “single” as a category of this variable, thereby limiting variability. Lack of variability in “partnership status” (only 15% were non-partnered) could have also affected the strength of relationship and significant levels. Regarding parenthood status, the responses of having one child or more were coded and placed in only one category, which limited variability.

**Limitations and Recommendations for Future Research**

This secondary analysis study has limitations that should be taken into consideration. First, by its nature, secondary analysis study invariably remains limited to the data that already had been collected.
Hence, other factors (e.g., previous suicide attempt) that can influence suicidal ideation among Thai women were not included. Further, the used data was collected in 2010, which is around seven years ago. Over this time, potential factors or adverse life events influencing suicidal ideation rates in Thailand might have occurred.

Participants in the current study were limited to those women receiving care at OB/GYN units at one of the hospitals located in northeast Thailand. These participants usually visited the hospital because of their experience of an illness or pregnancy, potentially affecting suicidal ideation in a certain way. Thus, the current findings are not be generalizable to Thai women who lived in other areas or did not visit this hospital during the study period. As an aside, future research studies should examine suicidal ideation psychosocial risk factors in a representative sample of the Thai general women population.

The data used in the current study was cross sectional in nature, preventing causal conclusions from being made. It is still unknown whether suicidal ideation was caused by poor quality of life or whether poor quality of life resulted from the experience of suicidal ideation. Thus, conducting future longitudinal research is recommended to determine whether the study psychosocial variables including QOL, perceived social support, intimate partner violence, partnership status, employment status, and parenthood status and suicidal ideation actually predicts the onset of suicide ideation.

Self-reporting measures were used to assess the study variables in the parent study, increasing the likelihood of producing response or social desirability bias, and in turn, limiting internal validity (Huprich, Bornstein, & Schmitt, 2011). For example, suicide is still stigmatized and illegal in Thailand, potentially making the participants to underreport suicidal ideation. Objective measures (e.g., Implicit Association Tests (IATs) (Nock et al, 2010) in conjunction with self-report measures should be used in future studies to improve validity. Further, the addition of a qualitative component could be another avenue for future research. Using qualitative methods (e.g., interviews), participants would be able to
describe the thoughts, feelings, and motives that might have led to suicidal ideations; these are likely not be captured fully using quantitative methods alone. The use of mixed methods research designs in studying psychosocial factors associated with suicidal ideation factors should contribute to more comprehensive understanding of this phenomenon.

Mediating effects of burdensomeness and thwarted belongingness on suicidal ideation were suggested by different previous studies (Donker, Batterham, Van Orden, & Christensen, 2014; Hill & Pettit, 2014; & Hollingsworth et al., 2017). Nevertheless, these effects were not tested in the current study because data related to burdensomeness and thwarted belongingness was not available in the original study. It is imperative that future research examines the potential role of perceived burdensomeness and thwarted belongingness in mediating the relationship between suicidal ideation and each of the study variables (QOL, perceived social support, intimate partner violence, partnership status, employment status, and parenthood status).

Although using one item for measuring suicidal ideation was valid and reliable in previous studies, this could have potentially limited construct validity by not presenting the full scope of suicidal ideation construct in the current study. Further psychometric evaluations of the one item used to measure suicidal ideation in the current study should be conducted. Further, a gold standard clinical evaluation of suicide ideation such as the score on the Beck’s Scale for Suicide Ideation (SSI) (Beck et al., 1979) is recommended for future research.

Nursing Implications

The results of the current study have several important implications for prevention and treatment of suicidal ideation among Thai adult women in primary healthcare settings. The study findings showed that suicidal ideation might be prevalent among Thai adult women. Healthcare providers should thus be aware of and able to detect those who are developing suicidal ideation. Most individuals who committed
suicide visited healthcare settings in the month prior to suicide (Luoma, Martin, & Pearson, 2002); therefore, healthcare provider should be prepared to intervene and identify warning signs of suicide such as suicidal ideation. Nurses are considered “front-line” in suicide prevention due to their significant amount of contact with patients (Berlim, Perizzolo, Lejderman, Fleck, & Joiner, 2007). Nurses routinely assess and manage patients who are considering suicide, but these patients are rarely identified as at-risk because of nurses’ limited time available for screening for suicidality for each individual patient or unavailable policies supporting them for the completion of such screening. Given this constraint, one potential screening option for suicidal ideation is that Thai healthcare providers, whether physicians or nurses, use a one-item screener to evaluate women’s suicidal ideation, followed by a more detailed evaluation if she screens positive for that item. The uses of one-item for assessing the presence of suicidal ideation, as in this study and previous research, showed ability in detecting cases with suicidal ideation. As a result, these one-item screeners could initially be used by health care providers as a quick screening tool for detecting suicidal ideation among this population of interest. Still, although many of these instruments are known to be reliable and valid, further research is required to evaluate routine use in clinical practice. If such studies demonstrate valid and reliable results, healthcare policy makers should be informed about the possibility of including these kinds of screeners in routine health assessment at healthcare settings.

As suicidal ideation is considered the first step toward death due to suicide (Gili-Planas, Roca-Bennasar, Ferrer-Perez, & Bernardo-Arroyo, 2001), healthcare providers must be alert and able to identify Thai women who have suicidal ideation. Nonetheless, those patients rarely report suicidal ideation for healthcare providers because of suicidality-related stigmatization. Seeing this constraint, educating healthcare providers about risk factors of suicidal ideation is considered an important act in suicide prevention programs because healthcare providers who are familiar with such factors can expect,
identify, and manage those patients with suicidal ideation. For example, healthcare providers who take care of a patient with poor quality of life, whether physically, emotionally, or socially, expect that such patient is potentially experiencing suicidal ideation, and they might therefore spend more time and effort to assess them about suicidal ideation. Although no definitive conclusions can be drawn about causal relationships, the study findings provided initial evidence about the role of poor quality of life in the determinism of suicidal ideation in Thai women. Healthcare providers who come in contact with women at risk for suicidal behaviors should receive continuous, sustained training, ideally as part of a professional training curriculum, and attend regular workshops about the role of quality of life in the causation of suicidal behaviors. This study examined psychosocial risk and protective factors of suicidal ideations in Thai women, but with the complexity of suicidal behavior, the consideration of more objective biological variables is also important. Future research should explore the role of biological factors such as neurotransmitters (e.g., serotonin or monoamine) and familial linkages to suicidal behavior. Healthcare providers should be updated about the findings of future research concerning other risk and protective factors of suicidal behaviors and apply these findings in practice.

The identification and management of risk and protective factors of suicidal behaviors are key components of national suicide prevention strategies, and can help determine the nature and type of interventions required (WHO, 2014). The study findings demonstrated that suicidal ideation is predicted by quality of life, which is a multidimensional construct including physical, emotional, social, and environmental components. This pattern of findings suggests that a multidimensional intervention that targets all the components of quality of life might be needed to prevent and manage suicidal ideation reported by Thai women. The literature showed several multidimensional therapies that have showed effectiveness in improving quality of life and suicidal ideation in several populations. As an example, Cognitive Behavioral Therapy (CBT) could be used to help patients identify negative emotions and
distorted cognitions that lead to feelings of isolation or burden-laden perceptions. This therapy can also be employed to strengthen patients’ social networks by using behavioral activation strategies that increase engagement with others (Stangier, Schramm, Heidenreich, Berger, & Clark, 2011 & Walker, 2014). Furthermore, Interpersonal psychotherapy Therapy (IPT), which focuses on creating a sense of social connectedness and improving the quality of interpersonal relationships (Beckner, Howard, Vella, & Mohr, 2010 & Walker, 2014), might help decrease thwarted belongingness feelings resulting from poor social quality of life as well as suicide risk.

Implementing evidence-based interventions such as Problem Solving Therapy by appropriately trained healthcare providers could also be helpful for people who are at risk of suicidal ideation. This therapy improves patients’ social quality of life by helping them improve their social problem solving and coping skills (Gustavson, Alexopoulos, Niu, McCulloch, Meade & Areán, 2016). It teaches patients how to correctly identify and define stressful life experiences that they face, create alternative solutions, and assess whether or not the solution they chose was helpful in managing stressful experiences. This ability to cope with everyday stressful experiences will likely increase patient self-efficacy and decreases negative outcomes such as strained interpersonal relationships, thereby reducing suicide risk (Robinson-Smith, Johnston, & Allen, 2000; Townsend et al., 2001; & Walker, 2014).

Despite all of this, experimental studies to examine the efficacy of these existing interventions in our populations of interest are required. Such studies should assess these interventions with a focus on both efficacy and effectiveness. They should use participants such as those in the current study to assess the effectiveness of these interventions in improving quality of life and suicidal ideation and translate the findings into real-world clinical settings.

**Conclusion**
In sum, the current study moved towards a more comprehensive understanding of psychosocial determinants associated with suicidal ideation. Research examining psychosocial determinants of suicidal ideation in women continues to grow. But there remains limited research examining the role of psychosocial determinants in predicting suicidal ideation in Asian women. This study addressed a gap by specifically examining the association between QOL, perceived social support, intimate partner violence, partnership status, employment status, and parenthood status and suicidal ideation in Thai women.

Overall, the results of this study emerged as mixed in regard to consistency with prior studies. Consistent with most of the results in the literature, participants indicated quality of life as a significant psychosocial predictor of suicidal ideations in the current study. On the contrary, no significant associations appeared between suicidal ideation and each of perceived social support, intimate partner violence, partnership status, employment status or parenthood status, which conflicts with various previous studies. This resultant incongruence can be explained by several factors, such as the use of cross sectional data, use of subjective measures to assess the study variables, and use of single item to assess the study outcome (suicidal ideation).

The findings of the current study can serve as an empirical basis for planning and implementing suicidal ideation prevention programs and/or establishing or revising social policies for the target population. For instance, because of the fact that rates of suicidal ideation increase with poor quality of life, quality of life improvement, including physical, social, psychological, and environmental aspects, should be one of the key elements of suicidal ideation prevention programs implemented in this population. Finally, the study findings offer important insights for future research, specifically research that focuses on intervention of suicidal ideation.
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Appendix A

(Original Background Information Questionnaire)

**ID:** _____________

**Date:** _____________

*Instruction.* Please answer all questions by filling in the space provided or by selecting the answer as indicated

**About yourself**

1. If you are pregnant, how many weeks are you pregnant? ________________

2. You are ________________ years old

3. What is your highest education level?
   - [ ] Did not attend school
   - [ ] Grade six or below
   - [ ] Junior High School
   - [ ] High School
   - [ ] Diploma/Associate Degree
   - [ ] Bachelor’s degree
   - [ ] Master’s or doctoral degree

2. What is your occupation?
   - [ ] Unemployed
   - [ ] Farmer
   - [ ] Laborer
   - [ ] government employee
   - [ ] cooperation employee
   - [ ] professional
   - [ ] small business employee
   - [ ] other occupations

3. What is your family monthly income?
   - [ ] Less than 1,000 Baht
   - [ ] 1,000-5,000 Baht
   - [ ] 5,000-9,000 Baht
   - [ ] 9,001-20,000 Baht
   - [ ] More than 20,000 Baht

4. What is your marital status?
   - [ ] Married with marriage certificate
   - [ ] Married without marriage certificate
   - [ ] Separate, divorced, widowed
   - [ ] De facto relationship
5. Do you drink alcohol?

☐ Yes, rarely (about once a month)  ☐ Yes, occasionally (about every other week)

☐ Yes, frequently (at least once a week)  ☐ No

About your partner

6. Your husband/partner is ________________ years old

7. What is your husband/partner’s highest education level?

☐ Did not attend school  ☐ Grade six or below  ☐ Junior High School

☐ High School  ☐ Diploma/Associate Degree

☐ Bachelor’s degree  ☐ Master’s or doctoral degree

8. What is your husband/partner’s occupation?

☐ Unemployed  ☐ Farmer  ☐ Laborer  ☐ government employee

☐ cooperation employee  ☐ professional  ☐ small business employee

☐ other occupations

9. Do you husband/partner drink alcohol?

☐ Yes, rarely (about once a month)  ☐ Yes, occasionally (about every other week)

☐ Yes, frequently (at least once a week)  ☐ No

Family Information

10. Number of family members living in the household ________________

11. How many children do you have? ________________

12. How long have you been in the relationship? ________________

13. Do you family have any debt?

☐ Yes  ☐ No
Appendix B

(Background Information Questionnaire for Variables Included in the Current Study)

*ID:* _______________

*Date:* _______________

*Instruction.* Please answer all questions by filling in the space provided or by selecting the answer as indicated.

**About yourself**

1. You are ________________ years old

2. What is your occupation?

   - [ ] Unemployed     - [ ] Farmer
   - [ ] Laborer        - [ ] government employee
   - [ ] cooperation employee
   - [ ] professional   - [ ] small business employee
   - [ ] other occupations

3. What is your family monthly income?

   - [ ] Less than 1,000 Baht  - [ ] 1,000-5,000 Baht  - [ ] 5,000-9,000 Baht
   - [ ] 9,001- 20,000 Baht    - [ ] More than 20,000 Baht

4. What is your marital status?

   - [ ] Married with marriage certificate
   - [ ] Married without marriage certificate
   - [ ] Separate, divorced, widowed
   - [ ] De facto relationship

**Family Information**

5. Number of family members living in the household _________________

6. How many children do you have? _________________
Appendix C-1

(The 12-item Multi-dimensional Scale of Perceived Social Support (MSPSS))

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement. Circle the “1” if you Very Strongly Disagree Circle the “2” if you Strongly Disagree Circle the “3” if you Mildly Disagree Circle the “4” if you are Neutral Circle the “5” if you Mildly Agree Circle the “6” if you Strongly Agree Circle the “7” if you Very Strongly Agree

<table>
<thead>
<tr>
<th>Items</th>
<th>Very Strongly Disagree</th>
<th>Strongly Disagree</th>
<th>Mildly disagree</th>
<th>Neutral</th>
<th>Mildly Agree</th>
<th>Strongly Agree</th>
<th>Very Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There is a special person who is around when I am in need</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2. There is a special person with whom I can share my joys and sorrows.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>3. My family really tries to help me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>4. I get the emotional help and support I need from my family</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>5. I have a special person who is a real source of comfort to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>6. My friends really try to help me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>7. I can count on my friends when things go wrong</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>8. I can talk about my problems with my family.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>9. I have friends with whom I can share my joys and sorrow</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>10. There is a special person in my life who cares about my feelings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>11. My family is willing to</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
help me make decisions.

12. I can talk about my problems with my friends.
Appendix C-2

(The Severity of Violence Against Women Scale (SVAWS))

*Instructions:* Describe how often your partner has done each behavior by tick at the appropriate box.

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Never</th>
<th>Once</th>
<th>A few times</th>
<th>Many times</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hit or kick a wall, door or furniture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Throw, smash or break an object</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Drive dangerously with you in the car</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4. Throw an object at you</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Shake a finger at you</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6. Make threatening gestures or faces at you</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Shake a fist at you</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Act like a bully toward you</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Destroy something belonging to you</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Threaten to harm or damage things you care about</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>11. Threaten to destroy property</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Threaten someone you care about</td>
<td></td>
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<tr>
<td>13. Threaten to hurt you</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>14. Threaten to kill you</td>
<td></td>
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<td>---</td>
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<tr>
<td>15. Threaten to kill you</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Threaten you with a weapon</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Threaten you with a club-like object</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>18. Act like he wanted to kill you</td>
<td></td>
<td></td>
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<tr>
<td>19. Threaten you with a knife or gun</td>
<td></td>
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<tr>
<td>20. Hold you down pinning you in place</td>
<td></td>
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<tr>
<td>21. Push or shove you</td>
<td></td>
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<tr>
<td>22. Grab you suddenly or forcefully</td>
<td></td>
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<tr>
<td>23. Shake or roughly handle you</td>
<td></td>
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<tr>
<td>24. Scratch you</td>
<td></td>
<td></td>
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<tr>
<td>25. Pull your hair</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>26. Twist your arm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Spank you</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Bite you</td>
<td></td>
<td></td>
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<tr>
<td>29. Slap you with the palm of his hand</td>
<td></td>
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<tr>
<td>30. Slap you with the back of his hand</td>
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<tr>
<td>31. Slap you around your face and head</td>
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<tr>
<td>32. Hit you with an object</td>
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<tr>
<td>33. Punch you</td>
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<tr>
<td>34. Kick you</td>
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<tr>
<td>35. Stomp on you</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>36. Choke you</td>
<td></td>
<td></td>
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<tr>
<td>37. Use a club-like object on you</td>
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<tr>
<td>38. Burn you with something</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>39. Beat you up</td>
<td></td>
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<tr>
<td>40. Use a knife or gun on you</td>
<td></td>
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<tr>
<td>41. Demand sex whether you wanted it or not</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>42. Make you have oral (mouth) sex against your will</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>43. Make you have sexual intercourse against your will</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>44. Physically force you to have sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45. Make you have anal (bottom) sex against your will</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>46. Use an object on you in a sexual way</td>
<td></td>
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</tbody>
</table>
Appendix C-3

(The Psychological Maltreatment of Women Inventory (PMWI))

*Instructions:* Please tick the response that most accurately describes how your husband/partner acted toward you

<table>
<thead>
<tr>
<th>Your partner/husband’s behavior</th>
<th>Never</th>
<th>Rarely</th>
<th>Occasionally</th>
<th>Frequently</th>
<th>Very Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My partner called me names.</td>
<td></td>
<td></td>
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<tr>
<td>2. My partner swore at me.</td>
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<tr>
<td>3. My partner yelled and screamed at me</td>
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<td></td>
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<tr>
<td>4. My partner treated me like an inferior.</td>
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<tr>
<td>5. My partner monitored my time and made me account for my whereabouts.</td>
<td></td>
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</tr>
<tr>
<td>6. My partner used our money or made important financial decisions without talking</td>
<td></td>
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</tr>
<tr>
<td>7. My partner was jealous or suspicious of my friends.</td>
<td></td>
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</tr>
<tr>
<td>8. My partner interfered in my relationships with other family members.</td>
<td></td>
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</tr>
<tr>
<td>9. My partner accused me of having an affair with another man</td>
<td></td>
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</tr>
<tr>
<td>10. My partner tried to keep me from</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>doing things to help myself.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. My partner restricted my use of the car</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. My partner told me my feelings were irrational or crazy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. My partner tried to make me feel crazy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. My partner blamed me for his problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix C-4

World Health Organization Quality of Life (WHOQOL-BREF)

The following questions ask how you feel about your quality of life, health, or other areas of your life. I will read out each question to you, along with the response options. **Please choose the answer that appears most appropriate.** If you are unsure about which response to give to a question, the first response you think of is often the best one.

Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life **in the last four weeks.**

<table>
<thead>
<tr>
<th>Question</th>
<th>Very poor</th>
<th>Poor</th>
<th>Neither poor nor good</th>
<th>Good</th>
<th>Very good</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How would you rate your quality of life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Very dissatisfied</th>
<th>Dissatisfied</th>
<th>Neither satisfied nor dissatisfied</th>
<th>Satisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. How satisfied are you with your health?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

The following questions ask about **how much** you have experienced certain things in the last four weeks.

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
<th>A little</th>
<th>A moderate amount</th>
<th>Very much</th>
<th>An extreme amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. To what extent do you feel that physical pain prevents you from doing what you need to do?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. How much do you need any medical treatment to function in your daily life?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. How much do you enjoy life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. To what extent do you feel your life to be meaningful?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Running Head: PSYCHOSOCIAL DETERMINANTS OF SUICIDAL IDEATION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>A moderate amount</th>
<th>Very much</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>How well are you able to concentrate?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8.</td>
<td>How safe do you feel in your daily life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9.</td>
<td>How healthy is your physical environment?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

The following questions ask about how completely you experience or were able to do certain things in the last four weeks.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Moderately</th>
<th>Mostly</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.</td>
<td>Do you have enough energy for everyday life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11.</td>
<td>Are you able to accept your bodily appearance?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12.</td>
<td>Have you enough money to meet your needs?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13.</td>
<td>How available to you is the information that you need in your day-to-day life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14.</td>
<td>To what extent do you have the opportunity for leisure activities?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Very poor</th>
<th>Poor</th>
<th>Neither poor nor good</th>
<th>Good</th>
<th>Very good</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.</td>
<td>How well are you able to get around?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Very dissatisfied</th>
<th>Dissatisfied</th>
<th>Neither satisfied nor dissatisfied</th>
<th>Satisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.</td>
<td>How satisfied are you with your sleep?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
17. How satisfied are you with your ability to perform your daily living activities?  
   1  2  3  4  5

18. How satisfied are you with your capacity for work?  
   1  2  3  4  5

19. How satisfied are you with yourself?  
   1  2  3  4  5

20. How satisfied are you with your personal relationships?  
   1  2  3  4  5

21. How satisfied are you with your sex life?  
   1  2  3  4  5

22. How satisfied are you with the support you get from your friends?  
   1  2  3  4  5

23. How satisfied are you with the conditions of your living place?  
   1  2  3  4  5

24. How satisfied are you with your access to health services?  
   1  2  3  4  5

25. How satisfied are you with your transport?  
   1  2  3  4  5

The following question refers to how often you have felt or experienced certain things in the last four weeks.

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Seldom</th>
<th>Quite often</th>
<th>Very often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>26. How often do you have negative feelings such as blue mood, despair, anxiety, depression?</td>
<td>5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Do you have any comments about the assessment?**
Appendix C-5

(Suicidal ideation related questions)

Please circle what is closely applicable to you within the prior week.

A. Planning to commit suicide

B. Wanting to die

C. Life is not pleasant. Think about own death often but do not want to die

D. Not thinking about death